SONY

SDI 4:2:2 Input Adaptor

BKM-120D

NTSC/PAL Input Adaptor

BKM-127W

Analog Component Input Adaptor

BKM-129X

HD SDI Input Adaptor

BKM-142HD

Trinitron

MAINTENANCE MANUAL

1st Edition

Serial No. 2000001 and Higher (ALL MODELS)

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

Table of Contents

SONY

SDI 4:2:2 Input Adaptor

BKM-120D

NTSC/PAL Input Adaptor

BKM-127W

Analog Component Input Adaptor

BKM-129X

HD SDI Input Adaptor

BKM-142HD

INSTALLATION MANUAL Japanese/English
1st Edition
Serial No. 2000001 and Higher

Section 1
Operating Instructions

This section is extracted from operation manual.

For customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Table of Contents

English

BKM-120D SDI 4:2:2 Input Adaptor

The BKM-120D SDI 4:2:2 Input Adaptor is a video signal input adaptor for BVM-D9H/D14H series video monitors. When installed in an input option slot on the rear panel of the video monitor, it provides video input and output connectors for the monitor and a decoder for serial digital component signals.

Functions

Decoder for serial digital component signals

The BKM-120D is equipped with a decoder for serial digital component (525/625) signals.

Serial digital input and output signal connectors

The BKM-120D is equipped with two input and two output connectors for serial digital signals.

Active loop-through output (only terminals with the ϟ mark)

Digital signals connected to the input connectors are output.

Note

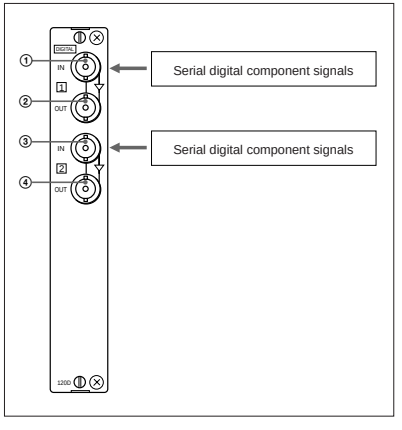
Digital signals are available only when the power of the video monitor is ON.

Using the Input and Output Connectors

For information about installing the BKM-120D in a video monitor input option slot, see "Installing into Video Monitors" on page 11(E).

Configuration of input/output connectors and signals that may be input

The configuration of the input and output connectors and the signals that may be input are shown below.



Input of serial digital component signals

You can input serial digital signals to connectors ① and ③. You can obtain active loop-through output of those signals from connectors ② and ④, respectively. You need not attach the 75-ohm termination to connectors ② and ④.

Assigning input signals to connectors

Before inputting signals to the BKM-120D, you must specify the type and format of the signal that will be input to each connector. To assign input signals to each connector, use the on-screen INPUT CONFIG menu of your video monitor.

For information about using the INPUT CONFIG menu, refer to the manual of your video monitor.

Note

After assigning input signals to each connector, carry out the AUTO adjustment of the CONTROL PRESET ADJ menu.

Specifications

General

Voltage	+5 V, ±6 V (supplied from the monitor)
Power consumption	4 W

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	–10°C to 40°C (14°F to 104°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa
Maximum external dimensions (w/h/d)	25 × 162 × 122 mm ($1 \times 6^{1}/_{2} \times 4^{7}/_{8}$ inches)
Mass	310 g (11 oz)

Input/output connectors

Digital input	BNC × 2, with active loop-through output

Signal characteristics

Digital component (525, 625) signals

Sampling frequency	Y: 13.5 MHz R–Y/B–Y: 6.75 MHz
Frequency characteristics	Y: 50 Hz to 6 MHz ±3 dB
Chrominance/luminance signals	
Delay time error	30 nsec max.
Gain error	5% max.
Quantization	10 bits/sample
Transmission distance	200 m (approx. 656 ft) max. (When using 5C–2V coaxial cables (Fujikura, Inc.) or equivalent.)
Return loss	15 dB min. (5 MHz to 270 MHz)

Accessories supplied

Installation Manual (1)

Design and specifications are subject to change without notice.

BKM-127W NTSC/PAL Input Adaptor

The BKM-127W NTSC/PAL Input Adaptor is a video signal input adaptor for BVM-D9H/D14H series video monitors. When installed in an input option slot on the rear panel of the video monitor, it provides video input and output connectors for the monitor and a decoder for analog composite NTSC and PAL signals.

Functions

Decoder for analog composite NTSC/PAL signals

The BKM-127W is equipped with decoders for analog composite NTSC and PAL signals.

Analog input and output signal connectors

The BKM-127W is equipped with two input and two output connectors for analog signals and one input and one output connectors for YC signals.

Automatic termination (only terminals with the ⩙ mark)

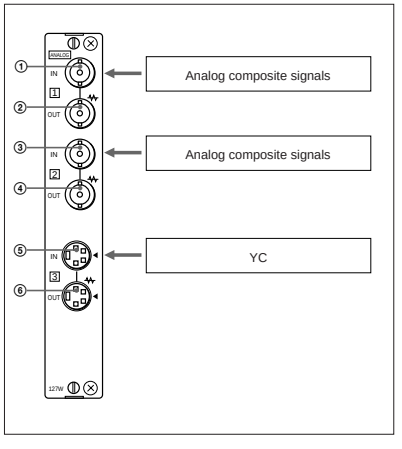
The input connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

Using the Input and Output Connectors

For information about installing the BKM-127W in a video monitor input option slot, see "Installing into Video Monitors" on page 11(E).

Configuration of input/output connectors and signals that may be input

The configuration of the input and output connectors and the signals that may be input are shown below.



Input of analog composite signals
You can input analog composite signals to connectors ① and ③. When the cable is connected to connectors ② and ④, the 75-ohm termination of connectors ① and ③ is automatically released and you can obtain the loop-through output from connectors ② and ④. Even if you do not wish to use loop-through output, you need not attach the 75-ohm termination to connectors ② and ④.

Input of YC signals
You can input YC signals to connector ⑤ and obtain loop-through output of the signals from connector ⑥. Even if you do not wish to use loop-through output, you need not attach the 75-ohm termination to connector ⑥.

Assigning input signals to connectors

Before inputting signals to the BKM-127W, you must specify the type and format of the signal that will be input to each connector. To assign input signals to each connector, use the on-screen INPUT CONFIG menu of your video monitor.

For information about using the INPUT CONFIG menu, refer to the manual of your video monitor.

Note

After assigning input signals to each connector, carry out the AUTO adjustment of the CONTROL PRESET ADJ menu.

Specifications

General

Power requirements +5 V, ±6 V
Power consumption 3 W

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	–10°C to 40°C (14°F to 104°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa
Maximum external dimensions	25 × 162 × 122 mm ($1 \times 6^{1}/_{2} \times 4^{7}/_{8}$ inches)
Mass	270 g (10 oz)

Input/output connectors

Analog composite signals
BNC × 2, high impedance, with loop-through output and 75-ohm automatic termination

YC signals
4-pin mini DIN × 1, with loop-through output and 75-ohm automatic termination

Signal characteristics

Analog composite, YC signals

Signal level
- Analog composite: 1 Vp-p +3 dB/–6 dB
- YC: Y: 1 Vp-p ±6 dB; C: 0.286 Vp-p ±6 dB (NTSC burst signal level); 0.3 Vp-p ±6 dB (PAL burst signal level)

Luminance signal
- Frequency characteristics
- Analog composite: Monochrome signal: 50 Hz to 6 MHz ±2 dB; Color signal: –30 dB relative to subcarrier frequency
- YC: Y: 50 Hz to 6 MHz ±2 dB

Chrominance signals
- Demodulation axis: R–Y/B–Y
- Subcarrier synchronization range: ±200 Hz min.
- Chroma phase adjustment range (NTSC): ±10° min.

Accessories supplied

Installation Manual (1)

Design and specifications are subject to change without notice.

BKM-129X Analog Component Input Adaptor

The BKM-129X Analog Component Input Adaptor is a video signal input adaptor for BVM-D9H/D14H series video monitors.
When installed in an input option slot on the rear panel of the video monitor, it provides video input and output connectors for the monitor.

Functions

Expansion of analog RGB/component inputs

Expansion of analog RGB/component inputs is possible[1].

Analog input and output signal connectors

The BKM-129X is equipped with one input and one output connectors for analog RGB/component signals.

EXT SYNC (external sync) signal connectors

The BKM-129X is equipped with one input and one output connectors for EXT SYNC signals.

Automatic termination (only terminals with the ⩙ mark)

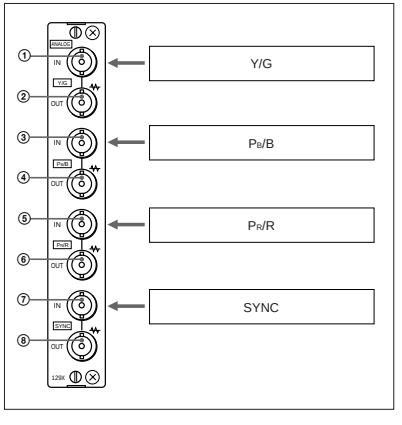
The input connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

Using the Input and Output Connectors

For information about installing the BKM-129X in a video monitor input option slot, see "Installing into Video Monitors" on page 11(E).

Configuration of input/output connectors and signals that may be input

The configuration of the input and output connectors and the signals that may be input are shown below.



Input of Y/P_B/P_R or RGB signals

When inputting Y/P_B/P_R or RGB signals, you can input Y or G signals to connector ①, P_B(B–Y) or B signals to connector ③ and P_R(R–Y) or R signals to connector ⑤.
When the cable is connected to connectors ②, ④ and ⑥, the 75-ohm termination of connectors ①, ③ and ⑤ is automatically released, and you can obtain loop-through output of the above signals from connectors ②, ④ and ⑥, respectively. Even if you do not wish to use loop-through output, you need not attach the 75-ohm termination to cconnectors ②, ④ and ⑥.

Input of EXT SYNC (external sync) signals

To operate the video monitor with the external sync signals, input the standard signals from an external sync generator, etc. to connector ⑦. You can obtain the loop-through output from connector ⑧. To operate video equipment with the video monitor by using the same sync signal, connect the external input connector of the video equipment to connector ⑧. Even if you do not wish to use loop-through output, you need not attach the 75-ohm termination to connector ⑧.

1) The BKM-129X is installed to the BVM-D9H/D14H series video monitor at the factory.

Assigning input signals to connectors

Before inputting signals to the BKM-129X, you must specify the type and format of the signal that will be input to each connector. To assign input signals to each connector, use the on-screen INPUT CONFIG menu of your video monitor.

For information about using the INPUT CONFIG menu, refer to the manual of your video monitor.

Note

After assigning input signals to each connector, carry out the AUTO adjustment of the CONTROL PRESET ADJ menu.

Specifications

General

Power requirements	+5 V, ±6 V (supplied from the monitor)
Power consumption	0.5 W

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	–10°C to 40°C (14°F to 104°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa
Maximum external dimensions (w/h/d)	25 × 162 × 122 mm ($1 \times 6^{1}/_{2} \times 4^{7}/_{8}$ inches)
Mass	250 g (9 oz)

Input/output connectors

Y/P_B/P_R, RGB signals
BNC × 3, high impedance, with loop-through output and 75-ohm automatic termination

EXT SYNC signals
BNC × 1, with loop-through output and 75-ohm automatic termination

Signal characteristics

Analog component (Y/P_B/P_R, RGB) signals

Signal level		
	Y/P_B(B-Y)/P_R(R–Y)	
		Y: 1 Vp-p ±6 dB
		P_B(B–Y): 0.7 Vp-p ±6 dB
		P_R(R–Y): 0.7 Vp-p ±6 dB
	R/G/B	1 Vp-p ±6 dB (sync on G)
Frequency characteristics		
	Y	48 Hz to 30 MHz ±3 dB
	P_B(B-Y)/P_R(R–Y)	48 Hz to 30 MHz ±3 dB
	R/G/B	48 Hz to 30 MHz ±3 dB
Return loss		40 dB min. (10 MHz)

EXT SYNC (external sync) signals

Signal level		
	EXT SYNC	0.3 to 8 Vp-p
	Return loss	40 dB min. (6 MHz)

Accessories supplied

Installation Manual (1)

Design and specifications are subject to change without notice.

BKM-142HD HD SDI Input Adaptor

The BKM-142HD HD SDI Input Adaptor is the video signal input adaptor for Sony BVM-D9H/D14H series video monitors.
When installed in the input option slots on the rear panel of the video monitor, it provides video input/output connectors for the monitor and a decoder for HD serial digital signals.

Functions

Decoding of HD serial digital signals

The built-in decoder decodes the HD serial digital signals.

HD serial digital input and output signal connectors

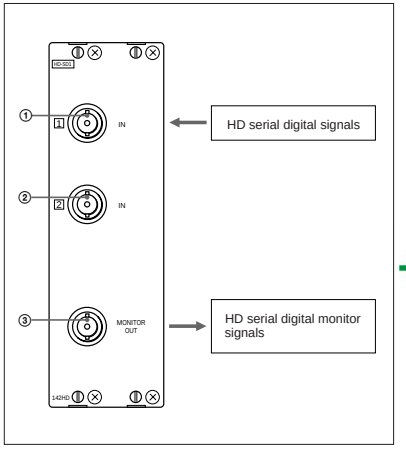
The BKM-142HD is equipped with two input connectors for serial digital signals and one output connector for monitor signals.

Using the Input and Output Connectors

For information about installing the BKM-142HD in the video monitor input option slots, see "Installing into Video Monitors" on page 11(E).

Configuration of input/output connectors and signals that may be input

The configuration of the input and output connectors and the signals that may be input are shown below.



Input of HD serial digital signals
You can input HD serial digital signals to connectors ① and ②. Input signals displayed on the video monitor screen are output from connector ③. You need not attach the 75-ohm termination to connector ③.

Notes
- The MONITOR OUT signals are available only when the power of the video monitor is ON. The MONITOR OUT signals are not available when the monitor is in standby mode.
- The MONITOR OUT signals do not satisfy the ON-LINE signal specifications.

Assigning input signals to connectors
Before inputting signals to the BKM-142HD, you must specify the type and format of the signal that will be input to each connector. To assign input signals to each connector, use the on-screen INPUT CONFIGN menu of your video monitor.

For information about using the INPUT CONFIG menu, refer to the manual of your video monitor.

Note
After assigning input signals to each connector, carry out the AUTO adjustment of the CONTROL PRESET ADJ menu.

Specifications

General

Power requirements	+5 V, ±6 V (supplied from the monitor)
Power consumption	9W

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	–10°C to 40°C (14°F to 104°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa
Maximum external dimensions (w/h/d)	50 × 162 × 122 mm (2 × 6 1/2 × 4 7/8 inches)
Mass	Approx. 730 g (1 lb 10 oz)

Input/output connectors

Digital input	BNC × 2, with monitor output

Signal characteristics

Digital signals

HD SDI signal input	
Input impedance	75 ohms, unbalanced
Data rate	1.4835Gbps to 1.485Gbps
Conform to SMPTE 292M, BTA-S004B	
MONITOR OUT	
Output signal amplitude	800 mVp-p±10%
Output impedance	75 ohms, unbalanced
Frequency response	
Y	48 Hz to 24 MHz ±3 dB
P_B, P_R	48 Hz to 12 MHz ±3 dB
Delay time error	30 nsec max.
Transmission distance	100 m (approx. 328 ft) max., When using 5C-FB coaxial cables (Fujikura, Inc.) or equivalent.

Accessory supplied

Installation manual (1)

Design and specifications are subject to change without notice.

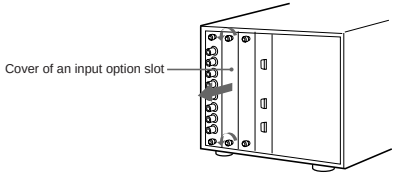
Installing into Video Monitors

Each adaptor can be installed in any input option slot. (The BKM-129X is installed into the left SLOT 1 of the BVM-D9H/D14H series video monitor. However, each adaptor can also be installed into the SLOT 1.)

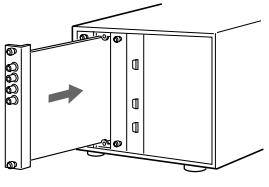
Notes

- Disconnect the AC power plug before installing or removing adaptors.
- Be sure to install any adaptor into the left SLOT 1. If no adaptor is installed into the SLOT 1, the picture may not be displayed correctly.

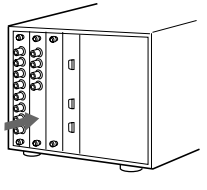
1 Remove the cover of an input option slot on the rear panel of your video monitor.



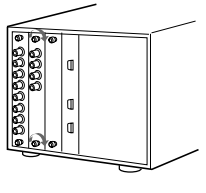
2 Insert the adaptor.



3 Push the adaptor in until it is firmly seated in the connector inside your video monitor.



4 Tighten the both screws to retain the adaptor.



Section 2
Electrical Adjustments

The BKM-127W is an optional board for the BVM series, (BVM-D9H1/D9H5/D14H1/D14H5), and therefore will not operate on its own. To adjust and measure it, BKM-127W must be mounted with a BVM series monitor. The BKM series monitor used in these adjustments should satisfy the respective specifications.

[Preparations]

- Required tools and measuring instruments

1. Signal generator
   YPBYPR signal generator
   - 1080/60i (1125) : SMPTE274M standard/ BTA S-001 standard
   - 1035/60i (1125) : BTA S-001 standard or SMPTE240M standard
   - 720/60p : SMPTE296M standard
   - 480/60p (525p) : BTA T-1004 standard or SMPTE293M standard
   - 480/60i (525) : ITU601
   - 1080/48i (1125) : —
   - 1080/50i (1125) : SMPTE274M standard
   - 720/50p : —
   - 575/50p (625p) : —
   - 575/50i (625) : ITU601

   NTSC analog composite signal generator
   HD SDI signal generator
   D1 SDI signal generator
2. BKM-127W (NTSC/PAL input adapter)
3. BKM-142HD (HD SDI input adapter)
4. BKM-120D (D1 SDI input adapter)
5. Oscilloscope

2-1. Preparations For BW Board Adjustments (BKM-127W)

Set as follows in the INPUT CONFIGURATION menu of the menu.

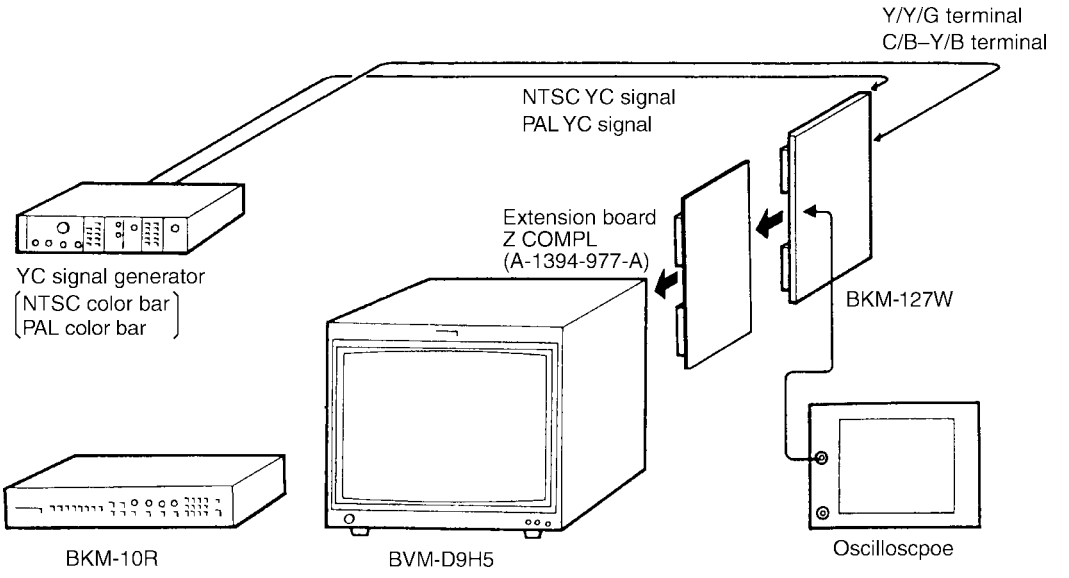
- 01 CH
  FORMAT ..... NTSC, PAL
  SLOT NO. ..... SLOT 1
  INPUT NO. 1
  COLOR TEMP ..... STD
  APERTURE 100
  H PHASE 000
  NTSC SETUP 0
  VCR MODE ..... OFF

- 02 CH
  FORMAT ..... NTSC, PAL
  SLOT NO. ..... SLOT 1
  INPUT NO. 2
  Same as 01 CH for others

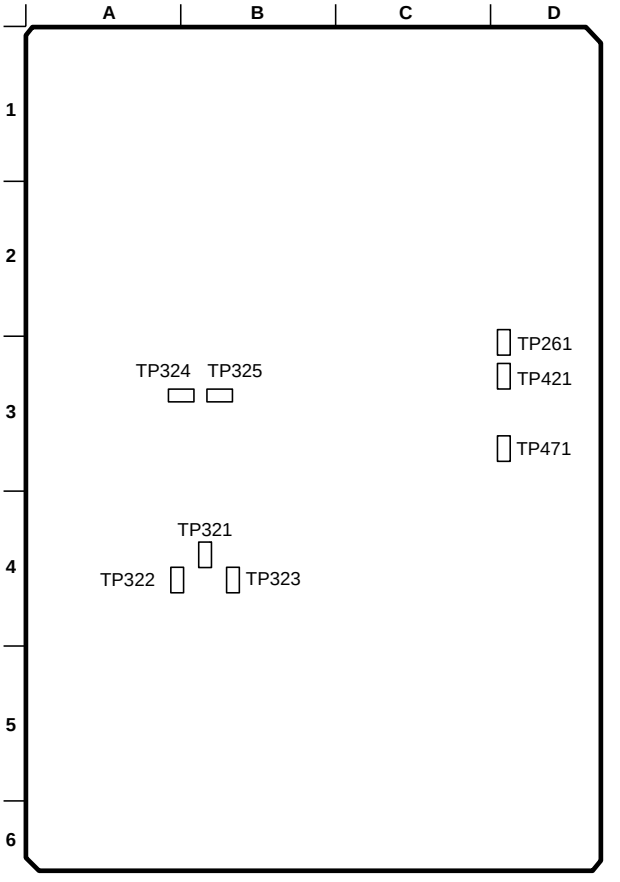
- 04 CH
  FORMAT ..... NTSC, PAL
  SLOT NO. ..... SLOT 1
  INPUT NO. 3
  Same as 01 CH for others

- 05 CH
  FORMAT ..... NTSC, PAL
  Same as 04 CH for others

• **NTSC YC, PAL YC signals: (BKM-127W)**



[Layout of adjustment-related parts] (BKM-127W)



BW BOARD (A side)

2-2. BYPASS Mode Y OUT Level Adjustment (BW Board)

Note: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
Y LEVEL

1. Input the PAL color bar signal into INPUT 2. (100% White Ref. 75% Saturation)
2. Set 02 CH and turn ON the MONO SW.
3. Connect the oscilloscope to TP261 of the BW board.
4. Adjust the Y LEVEL data so that the signal level becomes 645 mV.
5. Turn OFF the MONO SW.
   TP261 (Y)

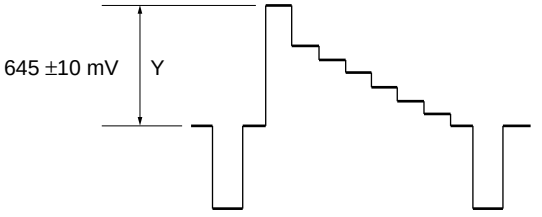


Fig. 2-1.

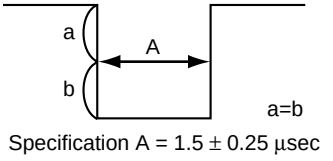
2-3. NTSC Mode Adjustment

1. Input the NTSC color bar signal into INPUT 1. (100% White Ref. 75% Saturation, 7.5% Setup)
2. Select 01 CH.

2-3-1. Clamp Pulse Width Adjustment

Note: The following adjustment menu is below the BKM-127W menu of the MAINTENANCE menu.
CLP W

1. Input the NTSC color bar signal.
2. Connect the oscilloscope to TP325 of the BW board.
3. Adjust the CLP W LEVEL data so that the pulse width (A) becomes as shown in Fig. 2-2.
   TP325
   (CLP W)



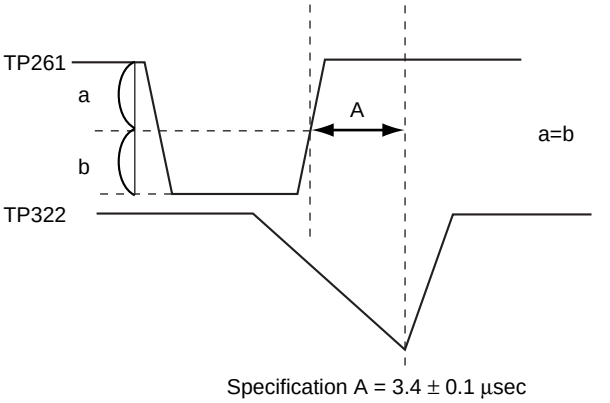
Specification A = 1.5 ± 0.25 µsec

Fig. 2-2.

2-3-2. Burst Gate Pulse 2 Width Adjustment

Note: The following adjustment menu is below the BKM-127W menu of the MAINTENANCE menu.
BGP W

1. Input the NTSC color bar signal.
2. Connect the CH1 probe of the oscilloscope to TP261 of the BW board, and connect the CH2 probe to TP322 of the BW board.
3. Adjust the BGP W data so that the output waveform of the oscilloscope becomes as shown in Fig. 2-3.



Specification A = 3.4 ± 0.1 µsec

Fig. 2-3.

2-3-3. 3.58 f0 Adjustment

Note 1: ON/OFF of ACC should be performed with BKM-127W menu of MAINTENANCE menu.
Note 2: The following adjustment menu is below the BKM-127W menu of the MAINTENANCE menu.
F0

1. Turn OFF ACC.
2. Input the NTSC color bar signal.
3. Connect TP322 and TP321 (5V) of the BW board using a jumper wire.
4. Connect the oscilloscope to TP421 of the BW board.
5. Adjust the F0 data so that the waveform stops or moves slowly.
6. Turn ON ACC.
7. Disconnect the jumper wire.

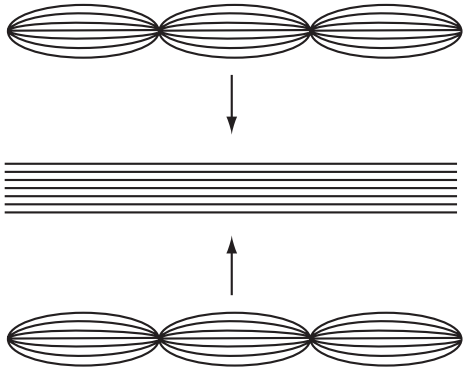


Fig. 2-4.

2-3-4. Phase Adjustment

Note 1: ON/OFF of ACC should be performed with BKM-127W menu of MAINTENANCE menu.
Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
SUB PHASE
ACC PHASE
R–Y PHASE

1. Input the NTSC color bar signal whose R–Y signal has been turned off.
2. Turn OFF ACC.
3. Connect the oscilloscope to TP421 of the BW board.
4. Adjust the SUB PHASE data so that the TP421 waveform becomes flat.
5. Turn ON ACC.
6. Adjust the ACC PHASE data so that the TP421 waveform becomes flat.
TP421

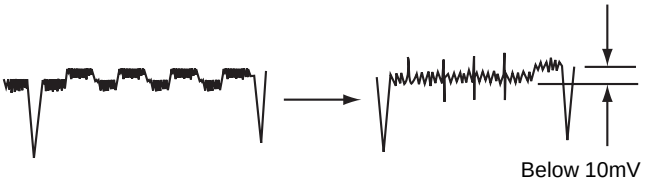


Fig. 2-5.

7. Input the NTSC color bar signal whose R–Y signal has been turned off.
8. Connect the oscilloscope to TP471 of the BW board.
9. Adjust the R–Y PHASE data so that the TP471 waveform becomes flat.
TP471

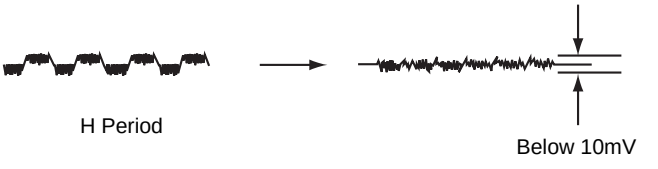


Fig. 2-6.

2-3-5. Level Adjustment

Note 1: ON/OFF of ACC should be performed with BKM-127W menu of MAINTENANCE menu.

Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.

Y LEVEL
PB LEVEL
PR LEVEL
ACC LEVEL

1. Input the NTSC color bar signal. (100% White Ref. 75% Saturation)
2. Connect the oscilloscope to TP261 of the BW board.
3. Adjust the Y LEVEL data so that the Y signal level becomes 658 mV.
   TP261 (Y)

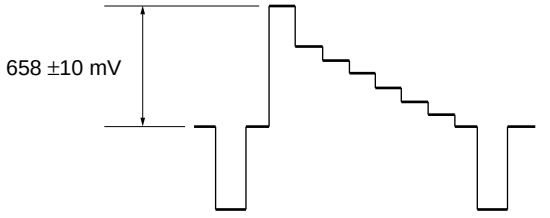


Fig. 2-7.

4. Turn OFF ACC.
5. Connect the oscilloscope to TP421 of the BW board.
6. Adjust the PB LEVEL data so that the PB signal level becomes 485 mV.
7. Turn ON ACC.
8. Adjust the ACC LEVEL data so that the PB signal level becomes 485 mV.
   TP421 (PB)

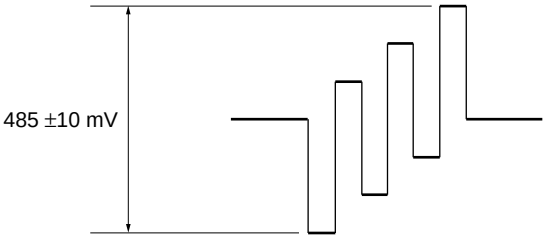


Fig. 2-8.

9. Turn OFF ACC.
10. Connect the oscilloscope to TP471 of the BW board.
11. Adjust the PR LEVEL data so that the PR signal level becomes 485 mV.
    TP471 (PR)

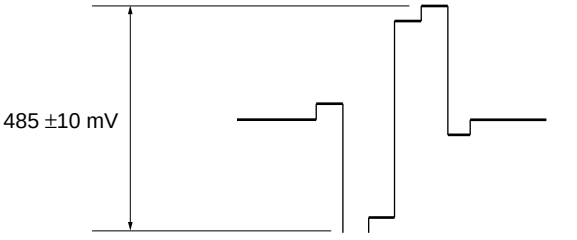


Fig. 2-9.

2-4. PAL Mode Adjustment

1. Input the PAL color bar signal into INPUT 2. (100% White Ref. 75% Saturation)
2. Select 02 CH.

2-4-1. Data Copy

1. Select 01 CH.
2. Read the following adjustment data at the BKM-127W menu of the MAINTENANCE menu.
   CLP W
3. Select 02 CH.
4. Set the following adjustment data to the same value as the NTSC mode data read at step 2 at the BKM-127W menu of the MAINTENANCE menu.
   CLP W

2-4-2. Burst Gate Pulse Width Adjustment

Note: The following adjustment menu is below the BKM-127W menu of the MAINTENANCE menu.
BGP W

1. Input the PAL color bar signal.
2. Connect the CH1 probe of the oscilloscope to TP261 of the BW board, and connect the CH2 probe to TP322 of the BW board.
3. Adjust the BGPW data so that the output waveform of the oscilloscope becomes as shown in Fig. 2-10.

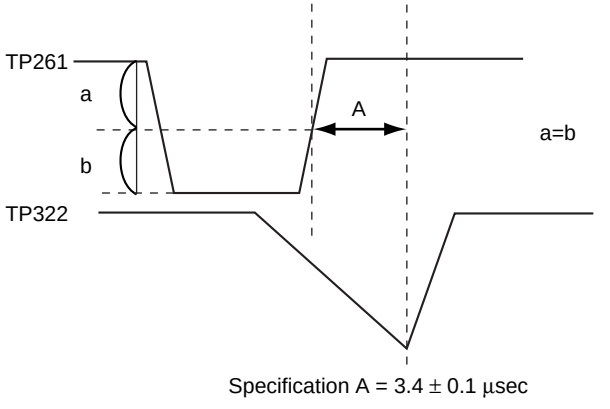


Fig. 2-10.

2-4-3. 4.43 f0 Adjustment

Note 1: ON/OFF of ACC should be performed with BKM-127W menu of MAINTENANCE menu.
Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
F0

1. Turn OFF ACC.
2. Input the PAL color bar signal.
3. Connect TP322 and TP321 (5V) of the BW board using a jumper wire.
4. Connect the oscilloscope to TP421 of the BW board.
5. Adjust the F0 data so that the waveform stops or moves slowly.
6. Turn ON ACC.
7. Disconnect the jumper wire.

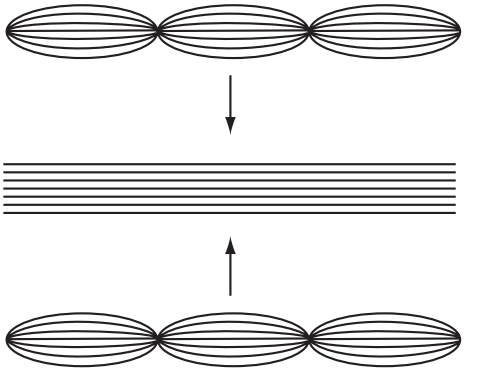


Fig. 2-11.

2-4-4. Phase Adjustment

Note 1: The following settings should be performed at the BKM-127W menu of the MAINTENANCE menu.
ACC ON/OFF
PAL S/D

Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
SUB PHASE
ACC PHASE
R–Y PHASE

1. Input the ANTI PAL BARS/RED signal.
2. Set PAL S/D to D and turn ON ACC.
3. Connect the oscilloscope to TP421 of the BW board.
4. Adjust the SUB PHASE data so that the TP421 waveform becomes flat.
5. Turn OFF ACC.
6. Adjust the ACC PHASE data so that the TP421 waveform becomes flat.
7. Connect the oscilloscope to TP471 of the BW board.
8. Adjust the R–Y PHASE data so that the TP471 waveform becomes flat.

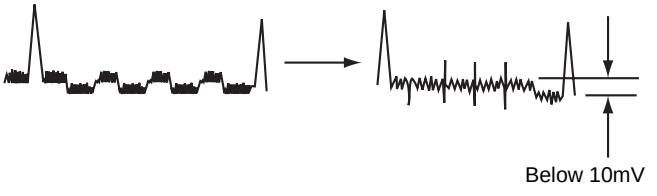


Fig. 2-12

2-4-5. Level Adjustment

Note 1: The following settings should be performed at the BKM-127W menu of the MAINTENANCE menu.
ACC ON/OFF
PAL S/D

Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
Y LEVEL
PB LEVEL
PR LEVEL
ACC LEVEL

1. Input the PAL color bar signal. (100% white Ref. 75% Saturation)
2. Connect the oscilloscope to TP261 of the BW board.
3. Adjust the Y LEVEL data so that the Y signal level becomes 645 mV.
   TP261 (Y)

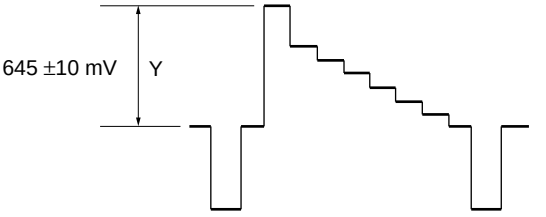


Fig. 2-13.

4. Set PAL S/D to S and turn OFF ACC.
5. Connect the oscilloscope to TP421 of the BW board.
6. Adjust the PB LEVEL data so that the PB signal level becomes 485 mV.
7. Turn ON ACC.
8. Adjust the ACC LEVEL data so that the PB signal level becomes 485 mV.
   TP421 (PB)

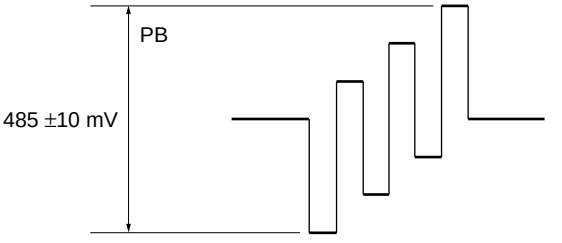


Fig. 2-14.

9. Turn OFF ACC.
10. Connect the oscilloscope to TP471 of the BW board.
11. Adjust the PR LEVEL data so that the PR signal level becomes 485 mV.
12. Set PAL S/D to D.
    TP471 (PR)

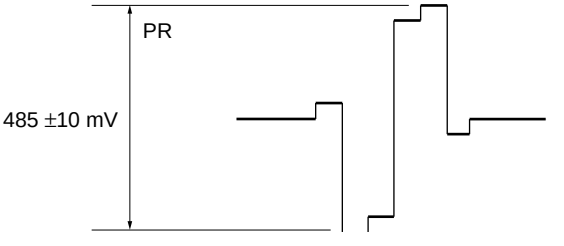


Fig. 2-15.

2-5. NTSC YC Mode Adjustment

1. Input the NTSC YC color bar signal into INPUT 4, 5. (100% White Ref. 75% Saturation)
2. Select 04 CH.

2-5-1. Data Copy

1. Select 01 CH.
2. Read the following adjustment data at the BKM-127W menu of the MAINTENANCE menu.
   CLP W
   BGP W
   F0
3. Select 04 CH.
4. Set the following adjustment data to the same value as the NTSC mode data read at step 2 at the BKM-127W menu of the MAINTENANCE menu.
   CLP W
   BGP W
   F0

2-5-2. Phase Adjustment

Note 1: ON/OFF of ACC should be performed with BKM-127W menu of MAINTENANCE menu.
Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
   SUB PHASE
   ACC PHASE
   R–Y PHASE

1. Input the NTSC YC color bar signal whose R–Y signal has been turned off.
2. Turn OFF ACC.
3. Connect the oscilloscope to TP421 of the BW board.
4. Adjust the SUB PHASE data so that the TP421 waveform becomes flat.
5. Turn ON ACC.
6. Adjust the ACC PHASE data so that the TP421 waveform becomes flat.
   TP421

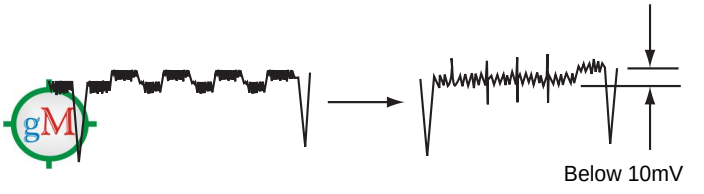


Fig. 2-16.

7. Input the NTSC YC color bar signal whose R–Y signal has been turned off.
8. Connect the oscilloscope to TP471 of the BW board.
9. Adjust the R–Y PHASE data so that the TP471 waveform becomes flat.
   TP471

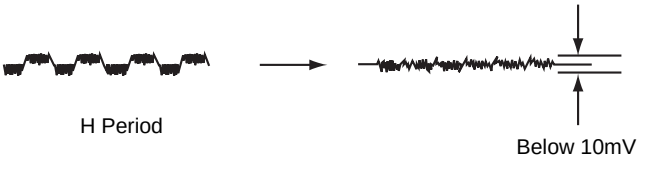


Fig. 2-17.

2-5-3. Level Adjustment

Note 1: ON/OFF of ACC should be performed with BKM-127W menu of MAINTENANCE menu.

Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
- Y LEVEL
- PB LEVEL
- PR LEVEL
- ACC LEVEL

1. Input the NTSC YC color bar signal.
2. Connect the oscilloscope to TP261 of the BW board.
3. Adjust the Y LEVEL data so that the Y signal level becomes 658 mV.
   TP261 (Y)

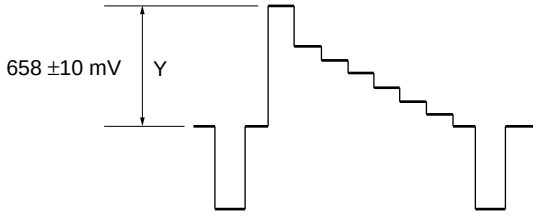


Fig. 2-18.

4. Turn OFF ACC.
5. Connect the oscilloscope to TP421 of the BW board.
6. Adjust the PB LEVEL data so that the PB signal level becomes 485 mV.
7. Turn ON ACC.
8. Adjust the ACC LEVEL data so that the PB signal level becomes 485 mV.
   TP421 (PB)

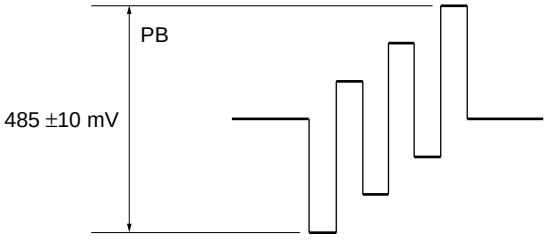


Fig. 2-19.

9. Turn OFF ACC.
10. Connect the oscilloscope to TP471 of the BW board.
11. Adjust the PR LEVEL data so that the PR signal level becomes 485 mV.
    TP471 (PR)

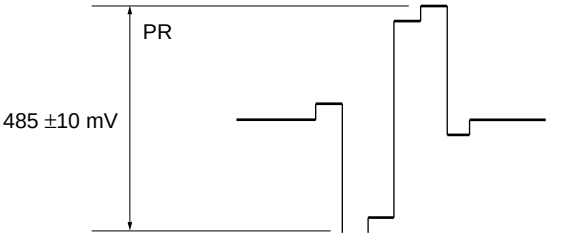


Fig. 2-20.

2-6. PAL YC Mode Adjustment

1. Input the PAL YC color bar signal into INPUT 4, 5. (100% White Ref. 75% Saturation)
2. Select 05 CH.

2-6-1. Data Copy

1. Select 01 CH.
2. Read the following adjustment data at the BKM-120W menu of the MAINTENANCE menu.
   CLP W
   BGP W
3. Select 05 CH.
4. Set the following adjustment data to the same value as the NTSC mode data read at step 2 at the BKM-120W menu of the MAINTENANCE menu.
   CLP W
   BGP W
5. Select 02 CH.
6. Read the following adjustment data at the BKM-120W menu of the MAINTENANCE menu.
   BGP W
   F0
7. Select 05 CH.
8. Set the following adjustment data to the same value as the NTSC mode data read at step 6 at the BKM-120W menu of the MAINTENANCE menu.
   BGP W
   F0

2-6-2. Phase Adjustment

Note 1: The following settings should be performed at the BKM-120W menu of the MAINTENANCE menu.
   ACC ON/OFF
   PAL S/D

Note 2: The following adjustment menus are below the BKM-120W menu of the MAINTENANCE menu.
   SUB PHASE
   ACC PHASE
   R–Y PHASE

1. Input the ANTI PAL BARS/RED signal.
2. Set PAL S/D to D and turn ON ACC.
3. Connect the oscilloscope to TP421 of the BW board.
4. Adjust the SUB PHASE data so that the TP421 waveform becomes flat.
5. Turn OFF ACC.
6. Adjust the ACC PHASE data so that the TP421 waveform becomes flat.
7. Connect the oscilloscope to TP471 of the BW board.
8. Adjust the R–Y PHASE data so that the TP471 waveform becomes flat.

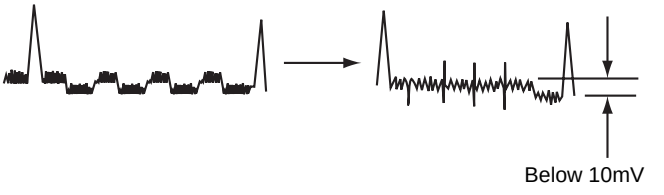


Fig. 2-21.

2-6-3. Level Adjustment (BW Board)

Note 1: The following settings should be performed at the BKM-127W menu of the MAINTENANCE menu.
ACC ON/OFF
PAL S/D

Note 2: The following adjustment menus are below the BKM-127W menu of the MAINTENANCE menu.
Y LEVEL
PB LEVEL
PR LEVEL
ACC LEVEL

1. Input the PAL YC color bar signal. (100% White Ref. 75% Saturation)
2. Connect the oscilloscope to TP261 of the BW board.
3. Adjust the Y LEVEL data so that the Y signal level becomes 645 mV.
   TP261 (Y)

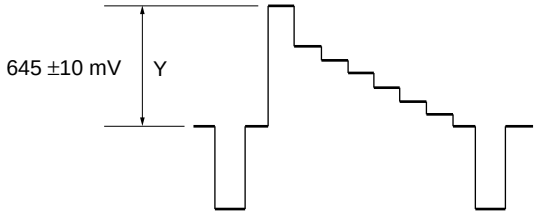


Fig. 2-22.

4. Set PAL S/D to S and turn OFF ACC.
5. Connect the oscilloscope to TP421 of the BW board.
6. Adjust the PB LEVEL data so that the PB signal level becomes 485 mV.
7. Turn ON ACC.
8. Adjust the ACC LEVEL data so that the PB signal level becomes 485 mV.
   TP421 (PB)

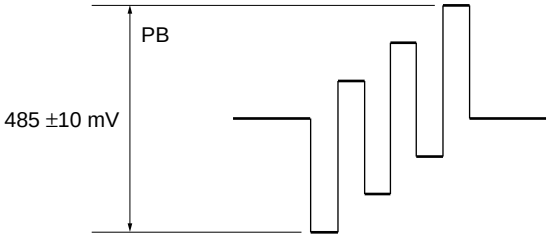


Fig. 2-23.

9. Turn OFF ACC.
10. Connect the oscilloscope to TP471 of the BW board.
11. Adjust the PR LEVEL data so that the PR signal level becomes 485 mV.
12. Set PAL S/D to D.
    TP471 (PR)

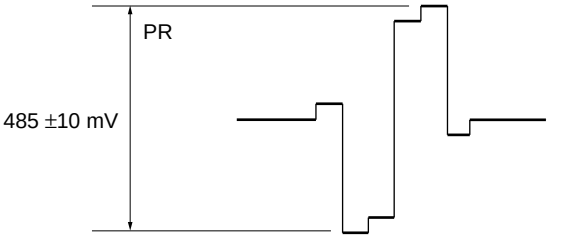


Fig. 2-24.

As BKM-120D and BKM-142HD are optional boards of the BVM series (BVM-D9H1/D9H5/D14H1/D14H5), they cannot be operated alone. To measure and adjust them, attach to the BVM series monitor. Use the BVM series monitor which satisfies the specifications.

2-7. BD/BHA/BHB Board (D1-SDI, HD SDI adjustment)

The following describes the electrical adjustments required for the repair and maintenance of the BKM-120D and BKM-142HD.

Preparation

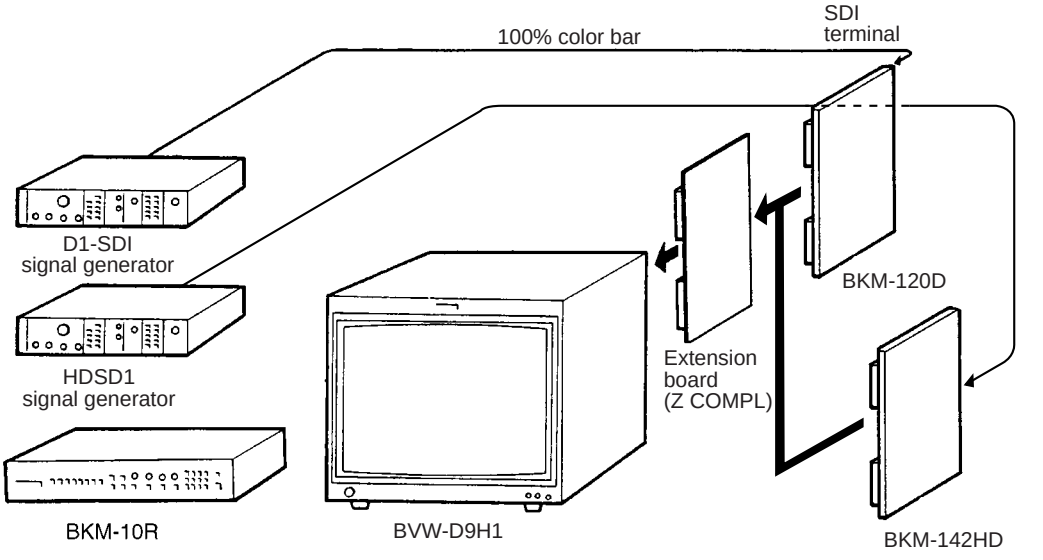
1. Equipment Used

Name	Main Specifications	Equipment Name
Oscilloscope	Frequency : DC to 150 MHz Above 2 phenomena (ADD mode)	TEKTRONIX 2445A or equivalent
HD SDI signal generator	With 1080 standard (SMPTE274M standard)	Shibasoku : TG15B6 or equivalent
Monitor		Sony BVM-D9H1 or equivalent

2. Tools

Name	Parts Name	Remarks
Extension board/cable kit (Z COMPL)	A-1394-977-A	

3. Connection



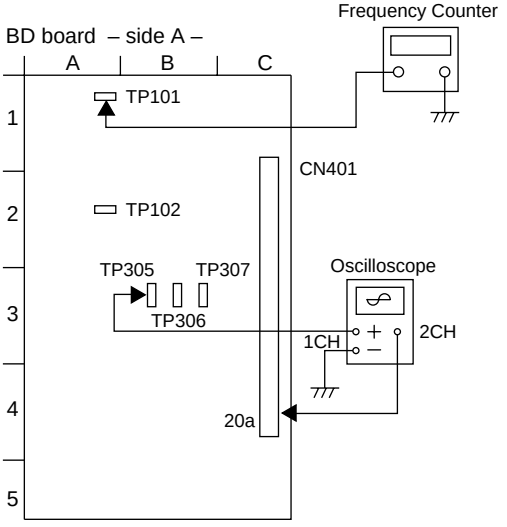
2-7-1. BD Board Adjustment (BKM-120D)

This section describes the adjustments of the Y LEVEL, PB LEVEL, and PR LEVEL when the D1-SDI signal is input to BD board.

Equipment Used

Oscilloscope
Frequency counter

Connection



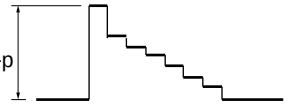
Setting the Monitor

Set the INPUT CONFIGURATION menu of the SET UP menu as follows.
FORMAT D1-SDI
SLOT NO. 2
INPUT NO. 1

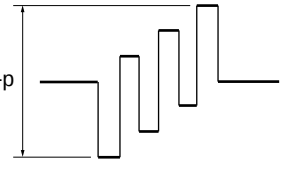
Adjusting Procedure

1. D1 OUTPUT LEVEL Adjustment

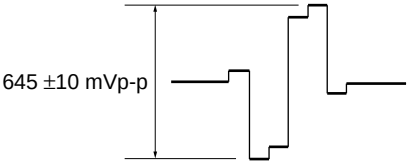
1-1. Y LEVEL Adjustment

Adjustment	Standard	Adjusting Point
• Input the 100% color bar signal (100% White Ref. 100% Saturation) into the SDI input terminal. • Connect an oscilloscope to TP305 (Y OUT).	TP305 (Y OUT) output level: 645 ±10 mVp-p 	The adjustment menu is located in the lower layer of BKM-120D of the MAINTENANCE menu. Y LEVEL

1-2. PB LEVEL Adjustment

Adjustment	Standard	Adjusting Point
• Input the 100% color bar signal (100% White Ref. 100% Saturation) into the SDI input terminal. • Connect an oscilloscope to TP306 (PB OUT).	TP306 (PB OUT) output level: 645 ±10 mVp-p 	The adjustment menu is located in the lower layer of BKM-120D of the MAINTENANCE menu. PB LEVEL

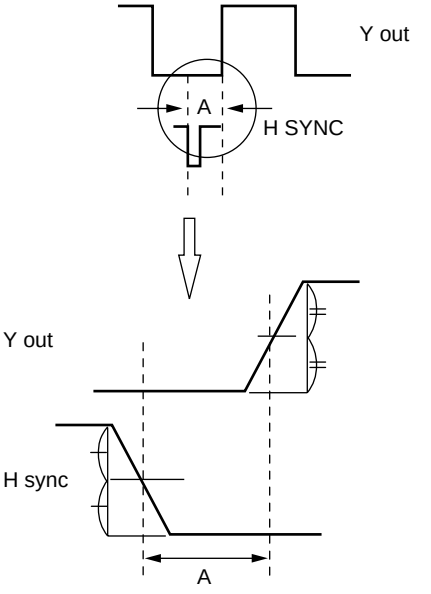
1-3. PR LEVEL Adjustment

Adjustment	Standard	Adjusting Point
• Input the 100% color bar signal (100% White Ref. 100% Saturation) into the SDI input terminal. • Connect an oscilloscope to TP307 (PR OUT).	TP307 (PR OUT) output level: 	The adjustment menu is located in the lower layer of BKM-120D of the MAINTENANCE menu. PR LEVEL

2. Digital Free Run Adjustment

Adjustment	Standard	Adjusting Point
Step 1 • No input signal • Connect an frequency counter to TP101 (DACLK).	TP101 (DACLK) output frequency: 27.0 ± 0.15 MHz	The adjustment menu is located in the lower layer of BKM-120D of the MAINTENANCE menu. DA-FV
Step 2 • Connect an frequency counter to TP102 (DBCLK).	TP102 (DBCLK) output frequency: 27.0 ± 0.15 MHz	The adjustment menu is located in the lower layer of BKM-120D of the MAINTENANCE menu. DB-FV

3. D1 H Phase Adjustment

Adjustment	Standard	Adjusting Point
• Input the D1 100% white signal (525/60). • Connect the CH1 probe of the oscilloscope to TP305 (Y OUT). • Connect the CH2 probe of the oscilloscope to CN401 20a (H SYNC).	 Spec A : = 8.5 ± 0.1µSec	The adjustment menu is located in the lower layer of BKM-120D of the MAINTENANCE menu. C CL P

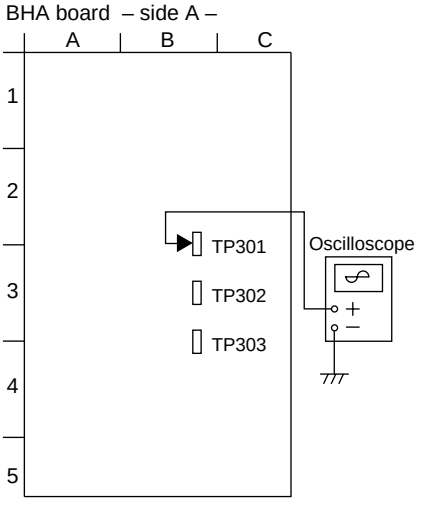
2-7-1. BHA/BHB Board Adjustment (BKM-142HD)

This section describes the adjustments of the Y LEVEL, PB LEVEL, and PR LEVEL when the HD SDI signal is input to BHA/BHB board.

Equipment Used

Oscilloscope

Connection



Setting the Monitor

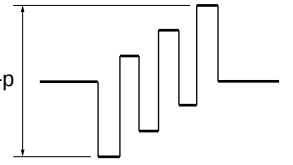
Set the INPUT CONFIGURATION menu of the SET UP menu as follows.

FORMAT ..... HD SDI
SLOT NO. 2
INPUT NO. 1

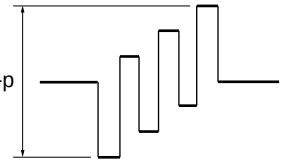
Adjusting Procedure

1. Y/PB/PR LEVEL Adjustment

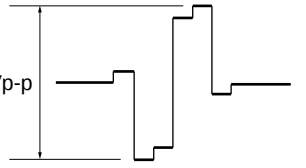
1-1. Y LEVEL Adjustment

Adjustment	Standard	Adjusting Point
• Input the 100% color bar signal (100% White Ref. 100% Saturation) into the HD SDI input terminal. • Connect an oscilloscope to TP301 (Y OUT).	TP301 (Y OUT) output level: 645 ±10 mVp-p 	The adjustment menu is located in the lower layer of BKM-142HD of the MAINTENANCE menu. Y LEVEL

1-2. PB LEVEL Adjustment

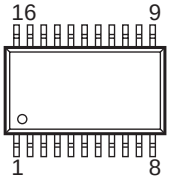
Adjustment	Standard	Adjusting Point
• Input the 100% color bar signal (100% White Ref. 100% Saturation) into the HD SDI input terminal. • Connect an oscilloscope to TP302 (PB OUT).	TP302 (PB OUT) output level: 645 ±10 mVp-p 	The adjustment menu is located in the lower layer of BKM-142HD of the MAINTENANCE menu. PB LEVEL

1-3. PR LEVEL Adjustment

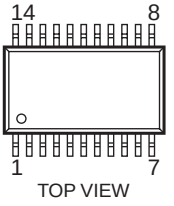
Adjustment	Standard	Adjusting Point
• Input the 100% color bar signal (100% White Ref. 100% Saturation) into the HD SDI input terminal. • Connect an oscilloscope to TP303 (PR OUT)	TP303 (PR OUT) output level: 645 ±10 mVp-p 	The adjustment menu is located in the lower layer of BKM-142HD of the MAINTENANCE menu. PR LEVEL

Section 3
Semiconductors

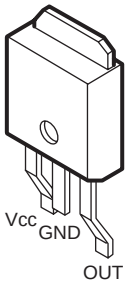
74VHC123AMTCX
MC74HC4053F
MC74HC595AFEL
TC74HC4538AF
TC74VHC175FT(EL)
TC74VHC595F(EL)



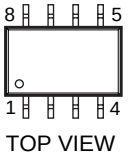
74VHC86MTCX
EL4451CS-TE2
TC74VHC00F
TC74VHC04F
TC74VHC08F
TC74VHC125F
TC74VHC86F
UPA102G-E1



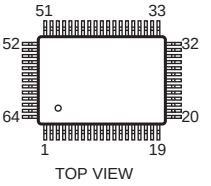
BA033FP-E2
BA05FP-E2



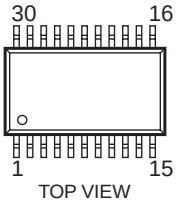
BA7046F
CXA1211M
CXA1521M
LM358PS
MC10EL16DR2
NJM2233BM
TC4W53FU
TL082M
TL431CPS
UPC4558G2
X25040SI



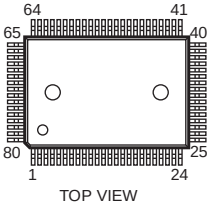
CXB1342R



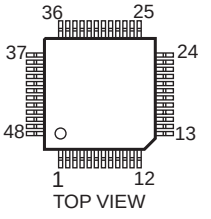
CXB1345N-T4



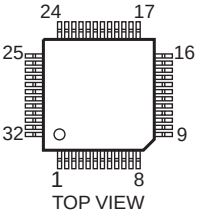
CXD2024AQ



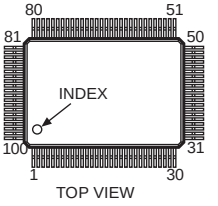
CXD2309Q
CXD2309Q-T6



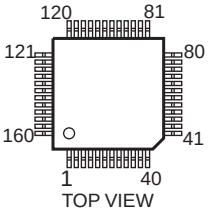
CXD2315Q



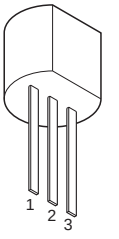
CXD8386AQ



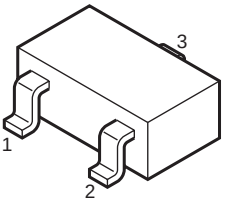
EPF8452AQC160-4



LM2990SX-5.0

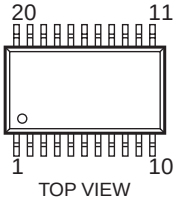


LM4040BIM3-5.0

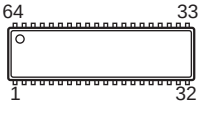


M51279FP

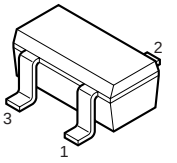
MB88346BPFV
MC100LVEL91DWR2
TC74VHCT541AFT(EL)



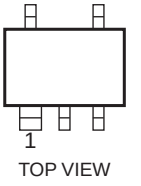
MB89613R-651



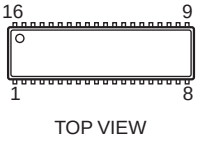
PST529CMT



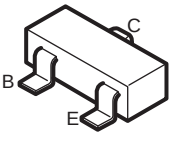
TC7S14FU(TE85R)
TC7S32FU(TE85R)
TC7W04FU



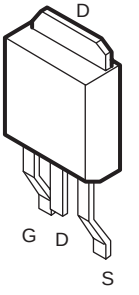
TDA4665T/V5-118
TL1451ACPWR



2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1162-G
2SA1462-Y33
2SC1623-L5L6
2SC2351-R2
2SC3545-T43

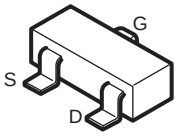


2SJ182S

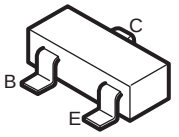


TRANSISTOR, DIODE

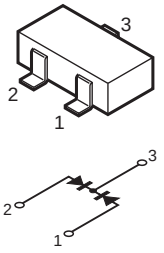
2SK160-K5



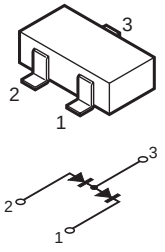
DTA114EKA-T146
DTC144EKA-T146



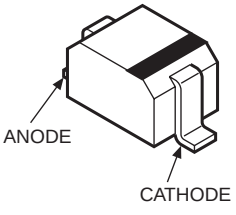
1SS184



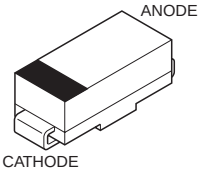
1SS226



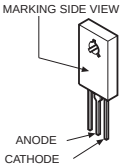
1SS352
1T363
RD6.2SB



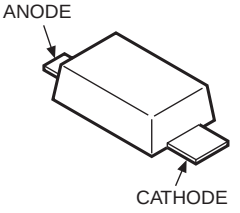
1SV230TPH3
NSQ03A06-TE16L



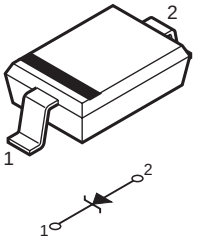
DA204U



MA111-(K8).S0



RD5.6SB



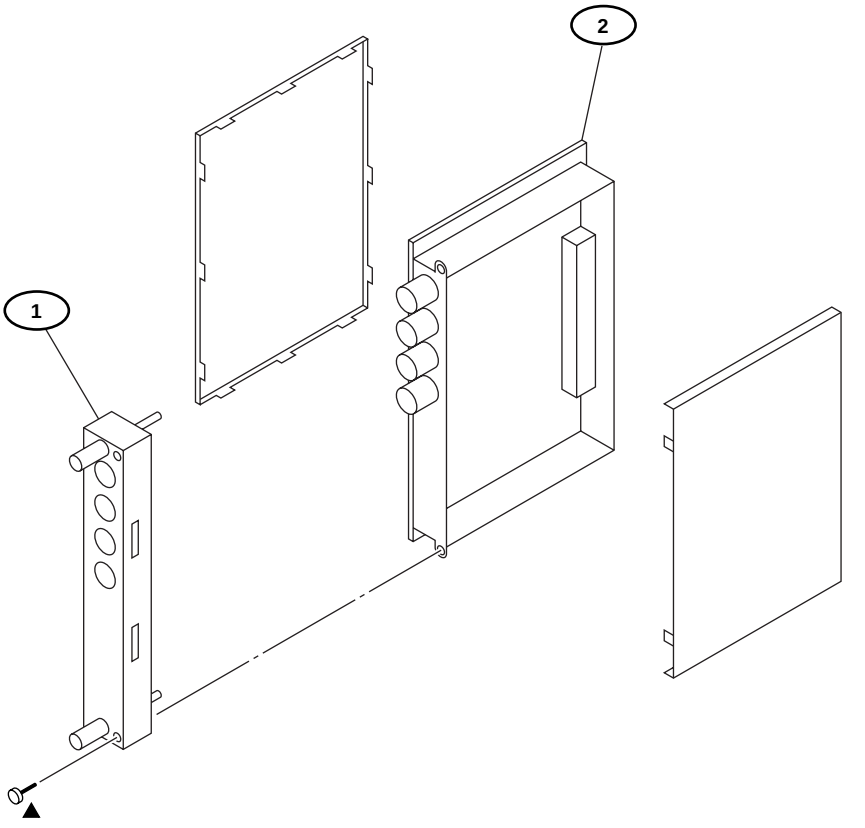
Section 4
Exploded Views

NOTE :

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.

4-1. BKM-120D

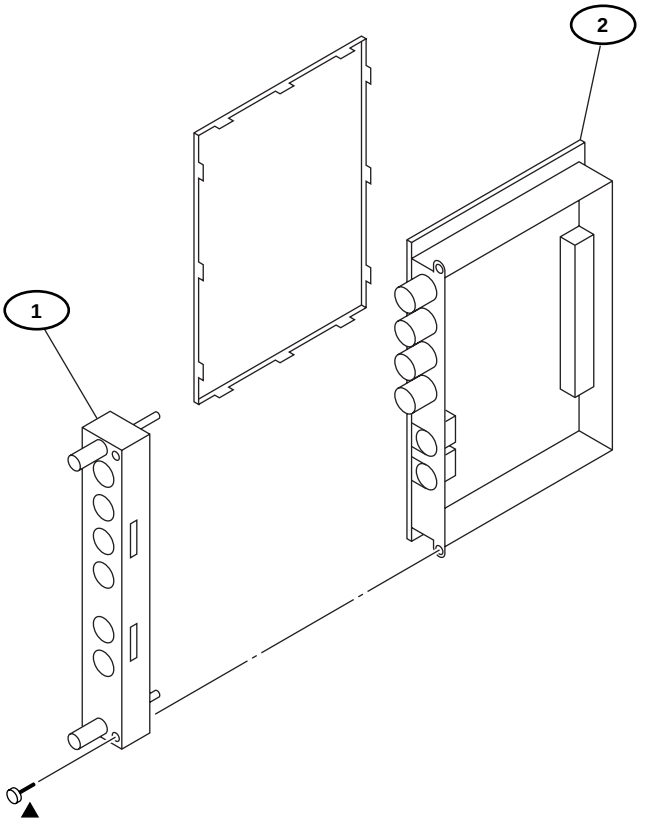
▲: 7-685-871-09 +BVTT 3x6



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	* X-4037-152-1	PANEL ASSY, CONNECTOR					
2	* A-1136-011-A	BD COMPL					

4-2. BKM-127W

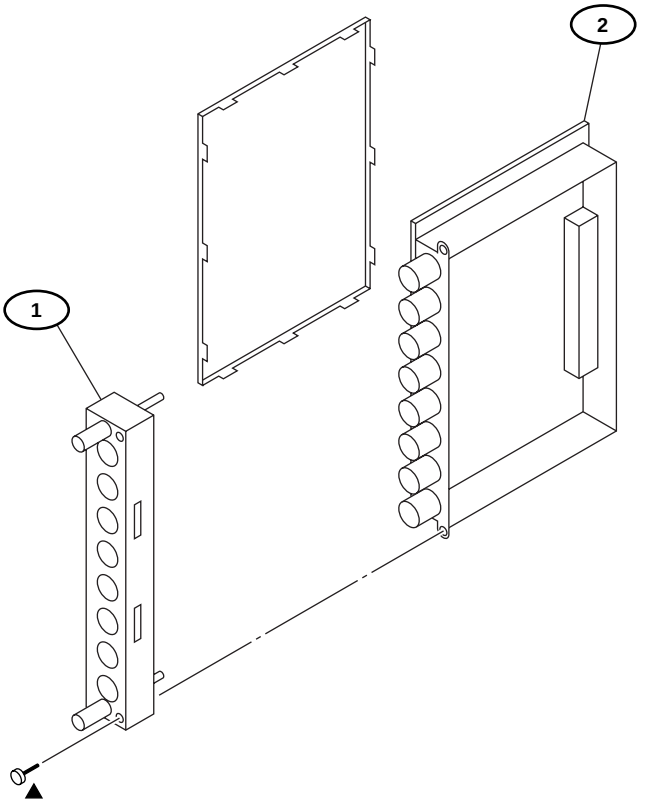
▲: 7-685-871-09 +BVTT 3x6



Ref.No.		Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	*	X-4037-153-1	PANEL ASSY, CONNECTOR					
2	*	A-1136-012-A	BW COMPL					

4-3. BKM-129X

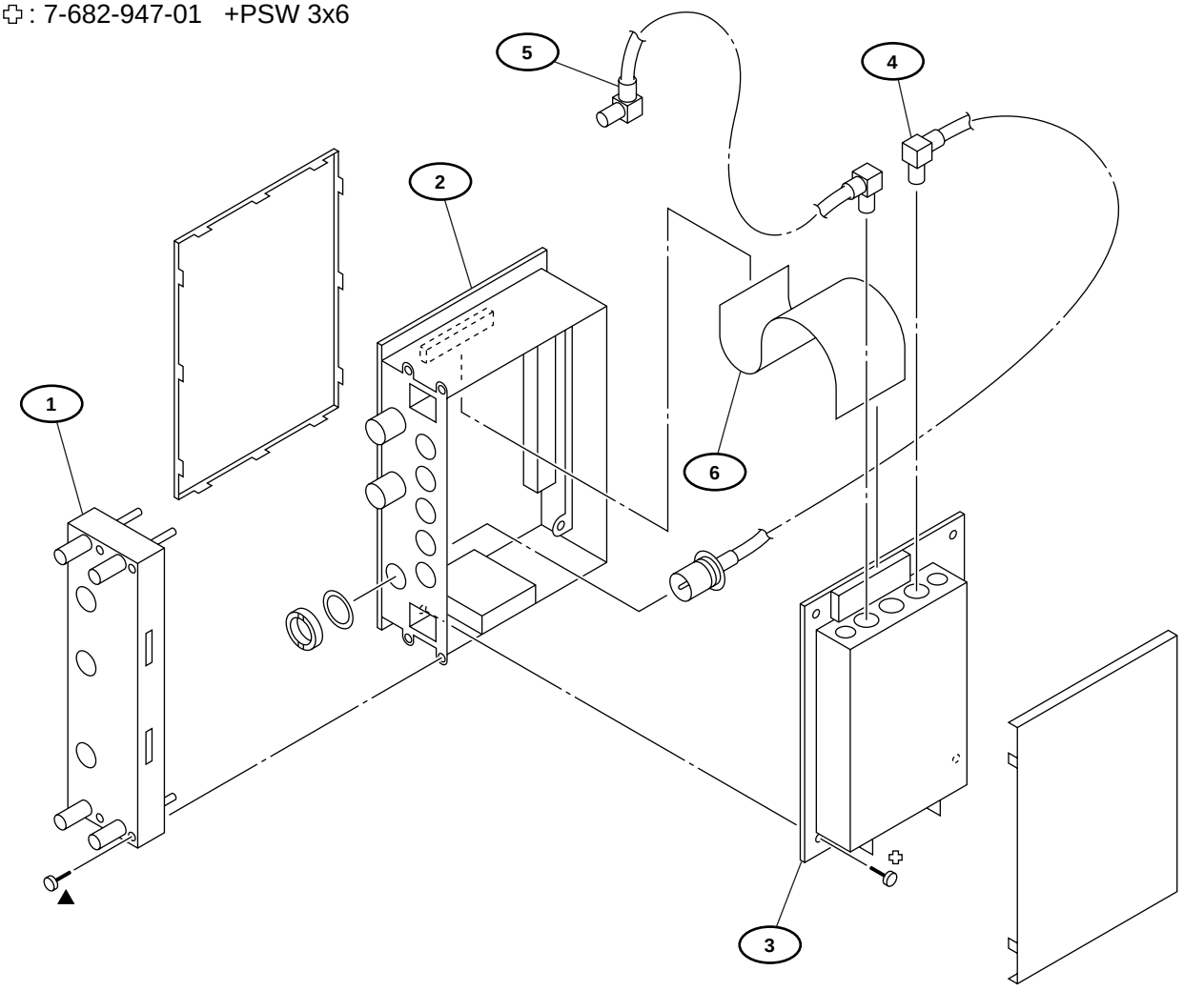
▲: 7-685-871-09 +BVTT 3x6



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	* X-4037-154-1	PANEL ASSY, CONNECTOR					
2	* A-1136-013-A	BX COMPL					

4-4. BKM-142HD

▲: 7-685-871-09 +BVTT 3x6
✜: 7-682-947-01 +PSW 3x6



Ref.No.		Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	*	X-4037-147-1	PANEL ASSY, CONNECTOR					
2	*	A-1136-052-A	BHA COMPL					
3	*	A-1136-053-A	BHB COMPL					
4	*	1-791-735-11	CABLE ASSY, COAXIAL					
5	*	1-791-736-11	CABLE ASSY, COAXIAL					
6		1-791-738-11	WIRE, FLAT TYPE					

Section 5
Electrical Parts List

NOTE :

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

RESISTORS

- All resistors are in ohms.
- F: nonflammable
- METAL: Metal-film resistor
- METAL OXIDE: Metal oxide-film resistor

Ref.No.	Part No.	Description			Remark
	* A-1136-011-A	BD COMPL (BKM-120D) **********			
		<CAPACITOR>			
C101	1-107-682-11	CERAMIC CHIP	1µF	10%	16V
C102	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C103	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C104	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C105	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C106	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C107	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C108	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C109	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C110	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C111	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C112	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C113	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C114	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C115	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C116	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C117	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C118	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C119	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C120	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C121	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C122	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C123	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C124	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C125	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C126	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C127	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C128	1-107-869-11	ELECT	470µF	20%	6.3V
C129	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C130	1-107-869-11	ELECT	470µF	20%	6.3V
C131	1-107-682-11	CERAMIC CHIP	1µF	10%	16V
C132	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C133	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C134	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C135	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C136	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C137	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C138	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C139	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C140	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C141	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C142	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C143	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C144	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C145	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C146	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C147	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C148	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C149	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C150	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C151	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C152	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C153	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C154	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C155	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C156	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C157	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C158	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C160	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C161	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C162	1-107-869-11	ELECT	470µF	20%	6.3V
C201	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C202	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C203	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C204	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C205	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C206	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C208	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C209	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C210	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C211	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C212	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C213	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C214	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C215	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C216	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C217	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C218	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C219	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C220	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C221	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C301	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C302	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C303	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C304	1-163-038-91	CERAMIC CHIP	0.1µF		25V

Ref.No.	Part No.	Description			Remark
C305	1-163-021-91	CERAMIC CHIP	0.01	10%	50V
C306	1-163-021-91	CERAMIC CHIP	0.01	10%	50V
C307	1-164-690-91	CERAMIC CHIP	2200PF	5%	50V
C308	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C309	1-107-869-11	ELECT	470µF	20%	6.3V
C310	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C311	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C312	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C313	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C314	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C315	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C316	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C317	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C318	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C319	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C320	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C321	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C322	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C323	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C324	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C325	1-104-851-11	TANTAL. CHIP	10µF	20%	10V
C326	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C327	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C328	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C329	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C330	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C331	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C332	1-136-177-00	CERAMIC CHIP	1µF	5%	50V
C333	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C401	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C402	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C403	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C404	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C405	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C406	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C407	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C408	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C409	1-107-869-11	ELECT	470µF	20%	6.3V
C410	1-107-869-11	ELECT	470µF	20%	6.3V
C411	1-107-869-11	ELECT	470µF	20%	6.3V
C412	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C413	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C414	1-126-204-11	ELECT CHIP	47µF	20%	16V
C415	1-126-204-11	ELECT CHIP	47µF	20%	16V
C416	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C417	1-163-031-11	CERAMIC CHIP	0.01µF		50V
		<CONNECTOR>			
CN201	* 1-563-017-11	CONNECTOR, F.P.C 30P			
CN202	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN204	* 1-564-512-11	PLUG, CONNECTOR 9P			
CN401	* 1-774-523-11	PIN, CONNECTOR (PC BOARD) 64P			
CN402	* 1-564-507-11	PLUG, CONNECTOR 4P			
		<DIODE>			
D201	8-719-800-76	DIODE 1SS226			
D401	8-719-158-15	DIODE RD5.6SB			
D403	8-719-016-74	DIODE 1SS352			
		<DELAY LINE>			
DL301	1-415-509-11	DELAY LINE			

Ref.No.	Part No.	Description		Remark
		<FERRITE BEAD>		
FB101	1-543-309-21	FERRITE	0µH	
FB102	1-543-309-21	FERRITE	0µH	
FB103	1-543-309-21	FERRITE	0µH	
FB104	1-543-309-21	FERRITE	0µH	
FB105	1-543-309-21	FERRITE	0µH	
FB106	1-543-309-21	FERRITE	0µH	
FB201	1-543-309-21	FERRITE	0µH	
FB301	1-543-309-21	FERRITE	0µH	
		<FILTER>		
FL201	1-239-183-11	FILTER, EMI		
FL202	1-239-183-11	FILTER, EMI		
FL203	1-239-183-11	FILTER, EMI		
FL204	1-239-183-11	FILTER, EMI		
FL301	1-233-241-11	FILTER, LOW PASS		
FL302	1-233-242-11	FILTER, LOW PASS		
FL303	1-233-243-11	FILTER, LOW PASS		
FL402	1-239-183-11	FILTER, EMI		
FL405	1-236-071-11	ENCAPSULATED COMPONENT		
FL406	1-236-071-11	ENCAPSULATED COMPONENT		
		<IC>		
IC101	8-759-981-48	IC TL082M		
IC102	8-759-490-41	IC TC74VHCT541AFT(EL)		
IC103	8-752-078-34	IC CXB1342R		
IC104	8-759-490-41	IC TC74VHCT541AFT(EL)		
IC105	8-759-460-72	IC BA033FP-E2		
IC106	8-759-981-48	IC TL082M		
IC107	8-759-490-41	IC TC74VHCT541AFT(EL)		
IC108	8-752-078-34	IC CXB1342R		
IC109	8-759-490-41	IC TC74VHCT541AFT(EL)		
IC110	8-759-460-72	IC BA033FP-E2		
IC201	8-759-100-96	IC UPC4558G2		
IC202	8-759-472-12	IC 74VHC123AMTCX		
IC203	8-759-081-44	IC TC74VHC04F		
IC205	8-759-081-42	IC TC74VHC00F		
IC206	8-759-991-19	IC PST529CMT		
IC207	8-759-472-12	IC 74VHC123AMTCX		
IC208	8-759-172-72	IC CXD8386AQ		
IC209	8-759-082-57	IC TC7W04FU		
IC210	8-759-257-96	IC TC7S14FU(TE85R)		
IC211	8-759-472-08	IC 74VHC86MTCX		
IC212	8-759-524-22	IC TC74VHC175FT(EL)		
IC213	8-759-081-48	IC TC74VHC08F		
IC214	8-759-058-64	IC TC7S32FU(TE85R)		
IC215	8-759-081-44	IC TC74VHC04F		
IC230	8-759-186-44	IC TC74VHC125F		
IC301	8-759-011-65	IC MC74HC4053F		
IC302	8-759-929-26	IC TL431CPS		
IC303	8-752-054-80	IC CXA1521M		
IC304	8-752-367-59	IC CXD2309Q		
IC305	8-752-054-80	IC CXA1521M		
IC306	8-752-054-80	IC CXA1521M		
IC401	8-759-186-44	IC TC74VHC125F		
IC402	8-759-594-41	IC MB89613R-651		
IC403	8-759-156-54	IC X25040SI		
IC405	8-759-424-67	IC MC74HC595AFEL		
IC406	8-759-064-36	IC MB88346BPFV		
IC407	8-759-064-36	IC MB88346BPFV		
IC408	8-759-460-74	IC BA05FP-E2		
IC409	8-759-539-89	IC LM2990SX-5.0		

Ref.No.	Part No.	Description	Remark
		<COIL>	
L101	1-403-659-11	INDUCTOR 10nH	
L102	1-403-664-11	INDUCTOR 27nH	
L103	1-403-664-11	INDUCTOR 27nH	
L104	1-403-659-11	INDUCTOR 10nH	
L105	1-403-664-11	INDUCTOR 27nH	
L106	1-403-664-11	INDUCTOR 27nH	
L301	1-412-545-11	INDUCTOR 470µH	
L401	1-412-529-81	INDUCTOR 22µH	
		<TRANSISTOR>	
Q101	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q102	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q103	8-729-101-11	TRANSISTOR 2SC2351-R2	
Q104	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q105	8-729-101-11	TRANSISTOR 2SC2351-R2	
Q106	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q107	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q108	8-729-101-11	TRANSISTOR 2SC2351-R2	
Q109	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q110	8-729-101-11	TRANSISTOR 2SC2351-R2	
Q201	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q202	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q203	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q204	8-729-028-91	TRANSISTOR DTA144EUA-T106	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q304	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q305	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q306	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q307	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q308	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q309	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q310	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q311	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q312	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q313	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q314	8-729-216-22	TRANSISTOR 2SA1162-G	
Q315	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q316	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q317	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q318	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q319	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q320	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q321	8-729-216-22	TRANSISTOR 2SA1162-G	
Q322	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q323	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q324	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q325	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q326	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q327	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q328	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q329	8-729-216-22	TRANSISTOR 2SA1162-G	
Q330	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q331	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q332	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q333	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q334	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q335	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q336	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q337	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q338	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q339	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q401	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q403	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<RESISTOR>	
R101	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R102	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R103	1-216-101-00	RES,CHIP 150K 5% 1/10W	
R104	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R105	1-216-091-00	RES,CHIP 56K 5% 1/10W	
R106	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R107	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R108	1-216-077-91	RES,CHIP 15K 5% 1/10W	
R109	1-216-095-00	RES,CHIP 82K 5% 1/10W	
R110	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R111	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R112	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R113	1-216-035-00	RES,CHIP 270 5% 1/10W	
R114	1-216-061-00	RES,CHIP 3.3K 5% 1/10W	
R115	1-216-059-00	RES,CHIP 2.7K 5% 1/10W	
R116	1-216-059-00	RES,CHIP 2.7K 5% 1/10W	
R117	1-216-059-00	RES,CHIP 2.7K 5% 1/10W	
R118	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R119	1-216-041-00	RES,CHIP 470 5% 1/10W	
R120	1-216-041-00	RES,CHIP 470 5% 1/10W	
R121	1-216-625-11	METAL CHIP 82 0.50% 1/10W	
R122	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R123	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R124	1-216-613-11	METAL CHIP 27 0.50% 1/10W	
R125	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R126	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R127	1-216-625-11	METAL CHIP 82 0.50% 1/10W	
R128	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R129	1-216-669-11	METAL CHIP 5.6K 0.50% 1/10W	
R130	1-216-661-11	METAL CHIP 2.7K 0.50% 1/10W	
R131	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R132	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R133	1-216-101-00	RES,CHIP 150K 5% 1/10W	
R134	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R135	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R136	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R137	1-216-091-00	RES,CHIP 56K 5% 1/10W	
R138	1-216-077-91	RES,CHIP 15K 5% 1/10W	
R139	1-216-095-00	RES,CHIP 82K 5% 1/10W	
R140	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R141	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R142	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R143	1-216-035-00	RES,CHIP 270 5% 1/10W	
R144	1-216-061-00	RES,CHIP 3.3K 5% 1/10W	
R145	1-216-059-00	RES,CHIP 2.7K 5% 1/10W	
R146	1-216-059-00	RES,CHIP 2.7K 5% 1/10W	
R147	1-216-059-00	RES,CHIP 2.7K 5% 1/10W	
R148	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R149	1-216-041-00	RES,CHIP 470 5% 1/10W	
R150	1-216-041-00	RES,CHIP 470 5% 1/10W	
R151	1-216-625-11	METAL CHIP 82 0.50% 1/10W	
R152	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R153	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R154	1-216-613-11	METAL CHIP 27 0.50% 1/10W	
R155	1-216-624-11	METAL CHIP 75 0.50% 1/10W	

Ref.No.	Part No.	Description			Remark
R156	1-216-611-11	METAL CHIP	22	0.50%	1/10W
R157	1-216-625-11	METAL CHIP	82	0.50%	1/10W
R158	1-216-049-91	RES,CHIP	1K	5%	1/10W
R159	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R160	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R161	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R162	1-216-097-91	RES,CHIP	100K	5%	1/10W
R201	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R202	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R203	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R204	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R205	1-216-097-91	RES,CHIP	100K	5%	1/10W
R206	1-216-073-00	RES,CHIP	10K	5%	1/10W
R207	1-216-089-91	RES,CHIP	47K	5%	1/10W
R208	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R209	1-216-089-91	RES,CHIP	47K	5%	1/10W
R210	1-216-081-00	RES,CHIP	22K	5%	1/10W
R211	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R212	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R213	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R214	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R215	1-216-025-91	RES,CHIP	100	5%	1/10W
R216	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R217	1-216-049-91	RES,CHIP	1K	5%	1/10W
R218	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R219	1-216-025-91	RES,CHIP	100	5%	1/10W
R220	1-216-097-91	RES,CHIP	100K	5%	1/10W
R221	1-216-097-91	RES,CHIP	100K	5%	1/10W
R250	1-216-097-91	RES,CHIP	100K	5%	1/10W
R251	1-216-097-91	RES,CHIP	100K	5%	1/10W
R252	1-216-097-91	RES,CHIP	100K	5%	1/10W
R300	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R301	1-216-049-91	RES,CHIP	1K	5%	1/10W
R302	1-216-049-91	RES,CHIP	1K	5%	1/10W
R303	1-216-049-91	RES,CHIP	1K	5%	1/10W
R304	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R305	1-216-295-91	SHORT	0		
R306	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R307	1-216-295-91	SHORT	0		
R308	1-216-049-91	RES,CHIP	1K	5%	1/10W
R309	1-216-049-91	RES,CHIP	1K	5%	1/10W
R310	1-216-049-91	RES,CHIP	1K	5%	1/10W
R311	1-216-295-91	SHORT	0		
R312	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R313	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R314	1-216-049-91	RES,CHIP	1K	5%	1/10W
R315	1-216-049-91	RES,CHIP	1K	5%	1/10W
R316	1-216-049-91	RES,CHIP	1K	5%	1/10W
R317	1-216-049-91	RES,CHIP	1K	5%	1/10W
R318	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R319	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R320	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R321	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R322	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R323	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R324	1-216-025-91	RES,CHIP	100	5%	1/10W
R325	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R326	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R327	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R328	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R329	1-216-049-91	RES,CHIP	1K	5%	1/10W
R330	1-216-049-91	RES,CHIP	1K	5%	1/10W
R331	1-216-097-91	RES,CHIP	100K	5%	1/10W
R332	1-216-013-00	RES,CHIP	33	5%	1/10W
R333	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R334	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R335	1-216-025-91	RES,CHIP	100	5%	1/10W
R336	1-216-025-91	RES,CHIP	100	5%	1/10W
R337	1-216-097-91	RES,CHIP	100K	5%	1/10W
R338	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R339	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R340	1-216-025-91	RES,CHIP	100	5%	1/10W
R341	1-216-025-91	RES,CHIP	100	5%	1/10W
R342	1-216-025-91	RES,CHIP	100	5%	1/10W
R343	1-216-049-91	RES,CHIP	1K	5%	1/10W
R345	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R346	1-216-025-91	RES,CHIP	100	5%	1/10W
R347	1-216-049-91	RES,CHIP	1K	5%	1/10W
R348	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R349	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R350	1-216-049-91	RES,CHIP	1K	5%	1/10W
R351	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R352	1-216-049-91	RES,CHIP	1K	5%	1/10W
R353	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R354	1-216-049-91	RES,CHIP	1K	5%	1/10W
R355	1-216-025-91	RES,CHIP	100	5%	1/10W
R356	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R357	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R358	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R359	1-216-295-91	SHORT	0		
R360	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R361	1-216-025-91	RES,CHIP	100	5%	1/10W
R362	1-216-025-91	RES,CHIP	100	5%	1/10W
R363	1-216-025-91	RES,CHIP	100	5%	1/10W
R364	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R365	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R367	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R368	1-216-049-91	RES,CHIP	1K	5%	1/10W
R369	1-216-097-91	RES,CHIP	100K	5%	1/10W
R370	1-216-097-91	RES,CHIP	100K	5%	1/10W
R371	1-216-013-00	RES,CHIP	33	5%	1/10W
R372	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R373	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R374	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R375	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R376	1-216-049-91	RES,CHIP	1K	5%	1/10W
R377	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R378	1-216-049-91	RES,CHIP	1K	5%	1/10W
R379	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R380	1-216-025-91	RES,CHIP	100	5%	1/10W
R381	1-216-295-91	SHORT	0		
R382	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R383	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R384	1-216-025-91	RES,CHIP	100	5%	1/10W
R385	1-216-025-91	RES,CHIP	100	5%	1/10W
R386	1-216-025-91	RES,CHIP	100	5%	1/10W
R387	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R388	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R389	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R390	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R391	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R392	1-216-049-91	RES,CHIP	1K	5%	1/10W
R394	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R395	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R396	1-216-097-91	RES,CHIP	100K	5%	1/10W
R397	1-216-013-00	RES,CHIP	33	5%	1/10W
R398	1-216-097-91	RES,CHIP	100K	5%	1/10W
R399	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R400	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R401	1-216-097-91	RES,CHIP	100K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R402	1-216-097-91	RES,CHIP	100K	5%	1/10W
R403	1-216-097-91	RES,CHIP	100K	5%	1/10W
R404	1-216-097-91	RES,CHIP	100K	5%	1/10W
R405	1-216-025-91	RES,CHIP	100	5%	1/10W
R406	1-216-025-91	RES,CHIP	100	5%	1/10W
R407	1-216-025-91	RES,CHIP	100	5%	1/10W
R408	1-216-025-91	RES,CHIP	100	5%	1/10W
R409	1-216-097-91	RES,CHIP	100K	5%	1/10W
R410	1-216-097-91	RES,CHIP	100K	5%	1/10W
R411	1-216-097-91	RES,CHIP	100K	5%	1/10W
R412	1-216-097-91	RES,CHIP	100K	5%	1/10W
R413	1-216-097-91	RES,CHIP	100K	5%	1/10W
R414	1-216-097-91	RES,CHIP	100K	5%	1/10W
R415	1-216-097-91	RES,CHIP	100K	5%	1/10W
R416	1-216-097-91	RES,CHIP	100K	5%	1/10W
R417	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R418	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R419	1-216-073-00	RES,CHIP	10K	5%	1/10W
R420	1-216-097-91	RES,CHIP	100K	5%	1/10W
R421	1-216-073-00	RES,CHIP	10K	5%	1/10W
R427	1-216-089-91	RES,CHIP	47K	5%	1/10W
R428	1-216-073-00	RES,CHIP	10K	5%	1/10W
R429	1-216-073-00	RES,CHIP	10K	5%	1/10W
R430	1-216-295-91	SHORT	0		
R431	1-216-073-00	RES,CHIP	10K	5%	1/10W
R432	1-216-073-00	RES,CHIP	10K	5%	1/10W
R433	1-216-073-00	RES,CHIP	10K	5%	1/10W
R434	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
		<RESISTER BLOCK>			
RB101	1-233-577-11	RES, CHIP NETWORK 470			
RB102	1-233-577-11	RES, CHIP NETWORK 470			
RB103	1-233-577-11	RES, CHIP NETWORK 470			
RB104	1-233-577-11	RES, CHIP NETWORK 470			
RB105	1-233-577-11	RES, CHIP NETWORK 470			
RB106	1-233-577-11	RES, CHIP NETWORK 470			
		<VARIABLE RESISTOR>			
RV301	1-238-087-11	RES, ADJ CERMET 1K			
RV302	1-238-087-11	RES, ADJ CERMET 1K			
		<RELAY>			
RY401	1-755-359-11	RELAY			
		<TERMINAL BOARD>			
TB101	1-694-599-11	TERMINAL BOARD ASSY, I/O			
		<CRYSTAL>			
X401	1-578-689-21	VIBRATOR (8MHz)			

****

Ref.No.	Part No.	Description			Remark
	* A-1136-052-A	BHA COMPL (BKM-142HD)			
		**********			
	1-763-039-11	MOTOR, DC FAN			
	7-625-723-00	RIVET 3X3.5			
	7-682-552-04	SCREW +B 3X16			
		<CAPACITOR>			
C301	1-126-391-11	ELECT CHIP	47µF	20%	6.3V
C302	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C304	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C305	1-126-391-11	ELECT CHIP	47µF	20%	6.3V
C307	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C308	1-164-346-11	CERAMIC CHIP	1µF		16V
C310	1-126-391-11	ELECT CHIP	47µF	20%	6.3V
C311	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C312	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C313	1-126-391-11	ELECT CHIP	47µF	20%	6.3V
C315	1-164-346-11	CERAMIC CHIP	1µF		16V
C316	1-126-391-11	ELECT CHIP	47µF	20%	6.3V
C317	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C318	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C319	1-126-391-11	ELECT CHIP	47µF	20%	6.3V
C321	1-164-346-11	CERAMIC CHIP	1µF		16V
C401	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C402	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C403	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C404	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C405	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C406	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C407	1-107-877-11	ELECT	1000µF	20%	10V
C408	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C409	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C410	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C411	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C412	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C413	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C414	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C415	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C416	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C417	1-126-403-11	ELECT CHIP	3.3µF	20%	50V
C418	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C419	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C420	1-126-403-11	ELECT CHIP	3.3µF	20%	50V
C421	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C422	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C423	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C424	1-126-396-11	ELECT CHIP	47µF	20%	16V
C425	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C426	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C427	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C428	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C429	1-126-405-11	ELECT	10µF	20%	50V
C430	1-126-396-11	ELECT CHIP	47µF	20%	16V
C431	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C432	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C433	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C434	1-107-869-11	ELECT	470µF	20%	6.3V
C435	1-107-884-11	ELECT CHIP	1000µF	20%	10V
C436	1-126-396-11	ELECT CHIP	47µF	20%	16V
C437	1-107-869-11	ELECT	470µF	20%	6.3V

Ref.No.	Part No.	Description	Remark
		<CONNECTOR>	
CN401	* 1-563-018-11	CONNECTOR, F.P.C 34P	
CN402	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN403	* 1-793-735-11	CONNECTOR, BNC	
CN404	* 1-793-735-11	CONNECTOR, BNC	
CN406	* 1-774-523-11	PIN, CONNECTOR (PC BOARD) 64P	
		<DIODE>	
D402	8-719-016-74	DIODE 1SS352	
D403	8-719-016-74	DIODE 1SS352	
D404	8-719-158-15	DIODE RD5.6SB	
D405	8-719-016-74	DIODE 1SS352	
D406	8-719-016-74	DIODE 1SS352	
		<DELAY LINE>	
DL301	1-411-830-21	DELAY LINE	
		<FILTER>	
FL301	1-233-606-21	FILTER (SMD), LOW PASS	
FL302	1-233-601-11	FILTER (SMD), LOW PASS	
FL303	1-233-601-11	FILTER (SMD), LOW PASS	
FL402	1-239-183-11	FILTER, EMI	
FL405	1-236-071-11	ENCAPSULATED COMPONENT	
FL406	1-236-071-11	ENCAPSULATED COMPONENT	
FL410	1-239-183-11	FILTER, EMI	
FL411	1-239-183-11	FILTER, EMI	
FL412	1-239-183-11	FILTER, EMI	
FL413	1-239-183-11	FILTER, EMI	
		<IC>	
IC301	8-759-477-17	IC EL4451CS-TE2	
IC302	8-759-477-17	IC EL4451CS-TE2	
IC303	8-759-477-17	IC EL4451CS-TE2	
IC401	8-759-100-96	IC UPC4558G2	
IC402	8-759-239-34	IC TC74HC4538AF	
IC403	8-759-064-36	IC MB88346BPFV	
IC404	8-759-186-44	IC TC74VHC125F	
IC405	8-759-186-84	IC TC74VHC86F	
IC406	8-759-594-41	IC MB89613R-651	
IC407	8-759-156-54	IC X25040SI	
IC408	8-759-011-65	IC MC74HC4053F	
IC409	8-759-081-42	IC TC74VHC00F	
IC410	8-759-082-61	IC TC4W53FU	
IC411	8-759-186-44	IC TC74VHC125F	
IC412	8-759-539-89	IC LM2990SX-5.0	
IC413	8-759-460-74	IC BA05FP-E2	
IC431	8-759-186-44	IC TC74VHC125F	
		<COIL>	
L401	1-412-549-11	INDUCTOR 1mH	
L402	1-412-529-81	INDUCTOR 22µH	
L403	1-412-529-81	INDUCTOR 22µH	
L404	1-412-529-81	INDUCTOR 22µH	
		<TRANSISTOR>	
Q301	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q302	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q303	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q304	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q305	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q306	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q307	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q308	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q309	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q310	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q311	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q312	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q313	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q314	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q315	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q316	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q317	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q318	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q319	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q320	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q321	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q322	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q323	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q324	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q325	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q326	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q327	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q328	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q329	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q401	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q402	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q403	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q406	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q407	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q408	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q409	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q410	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q411	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q412	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q413	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q414	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q415	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q416	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q417	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q418	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
		<RESISTOR>	
R301	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R302	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R303	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R304	1-216-081-00	RES,CHIP 22K 5% 1/10W	
R305	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R306	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R307	1-216-661-11	METAL CHIP 2.7K 0.50% 1/10W	
R308	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R309	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R310	1-216-025-91	RES,CHIP 100 5% 1/10W	
R311	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R312	1-216-025-91	RES,CHIP 100 5% 1/10W	
R313	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R314	1-216-025-91	RES,CHIP 100 5% 1/10W	
R315	1-216-013-00	RES,CHIP 33 5% 1/10W	
R316	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R317	1-216-639-11	METAL CHIP 330 0.50% 1/10W	
R318	1-216-639-11	METAL CHIP 330 0.50% 1/10W	
R319	1-216-025-91	RES,CHIP 100 5% 1/10W	
R320	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R321	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R322	1-216-025-91	RES,CHIP 100 5% 1/10W	
R323	1-216-049-91	RES,CHIP 1K 5% 1/10W	

Ref.No.	Part No.	Description			Remark
R324	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R325	1-216-025-91	RES,CHIP	100	5%	1/10W
R326	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R328	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R329	1-216-049-91	RES,CHIP	1K	5%	1/10W
R330	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R331	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R332	1-216-097-91	RES,CHIP	100K	5%	1/10W
R333	1-216-025-91	RES,CHIP	100	5%	1/10W
R334	1-216-019-00	RES,CHIP	56	5%	1/10W
R335	1-216-073-00	RES,CHIP	10K	5%	1/10W
R336	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R337	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R338	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R339	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R340	1-216-025-91	RES,CHIP	100	5%	1/10W
R341	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R342	1-216-025-91	RES,CHIP	100	5%	1/10W
R343	1-216-049-91	RES,CHIP	1K	5%	1/10W
R344	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R345	1-216-025-91	RES,CHIP	100	5%	1/10W
R346	1-216-013-00	RES,CHIP	33	5%	1/10W
R347	1-216-049-91	RES,CHIP	1K	5%	1/10W
R348	1-216-049-91	RES,CHIP	1K	5%	1/10W
R349	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R351	1-216-025-91	RES,CHIP	100	5%	1/10W
R352	1-216-097-91	RES,CHIP	100K	5%	1/10W
R353	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R354	1-216-073-00	RES,CHIP	10K	5%	1/10W
R355	1-216-019-00	RES,CHIP	56	5%	1/10W
R356	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R357	1-216-073-00	RES,CHIP	10K	5%	1/10W
R358	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R359	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R360	1-216-049-91	RES,CHIP	1K	5%	1/10W
R361	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R362	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R363	1-216-025-91	RES,CHIP	100	5%	1/10W
R364	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R365	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R366	1-216-025-91	RES,CHIP	100	5%	1/10W
R367	1-216-025-91	RES,CHIP	100	5%	1/10W
R368	1-216-049-91	RES,CHIP	1K	5%	1/10W
R369	1-216-049-91	RES,CHIP	1K	5%	1/10W
R370	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R372	1-216-025-91	RES,CHIP	100	5%	1/10W
R373	1-216-097-91	RES,CHIP	100K	5%	1/10W
R374	1-216-019-00	RES,CHIP	56	5%	1/10W
R375	1-216-073-00	RES,CHIP	10K	5%	1/10W
R376	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R377	1-216-073-00	RES,CHIP	10K	5%	1/10W
R378	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R401	1-216-689-11	RES,CHIP	39K	5%	1/10W
R402	1-216-077-91	RES,CHIP	15K	5%	1/10W
R403	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R404	1-216-097-91	RES,CHIP	100K	5%	1/10W
R405	1-216-089-91	RES,CHIP	47K	5%	1/10W
R406	1-216-073-00	RES,CHIP	10K	5%	1/10W
R407	1-216-049-91	RES,CHIP	1K	5%	1/10W
R408	1-216-689-11	RES,CHIP	39K	5%	1/10W
R409	1-216-077-91	RES,CHIP	15K	5%	1/10W
R410	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R411	1-216-097-91	RES,CHIP	100K	5%	1/10W
R412	1-216-097-91	RES,CHIP	100K	5%	1/10W
R413	1-216-097-91	RES,CHIP	100K	5%	1/10W
R414	1-216-097-91	RES,CHIP	100K	5%	1/10W
R415	1-216-073-00	RES,CHIP	10K	5%	1/10W
R416	1-216-049-91	RES,CHIP	1K	5%	1/10W
R417	1-216-097-91	RES,CHIP	100K	5%	1/10W
R422	1-216-049-91	RES,CHIP	1K	5%	1/10W
R423	1-216-049-91	RES,CHIP	1K	5%	1/10W
R424	1-216-049-91	RES,CHIP	1K	5%	1/10W
R425	1-216-049-91	RES,CHIP	1K	5%	1/10W
R426	1-216-049-91	RES,CHIP	1K	5%	1/10W
R427	1-216-049-91	RES,CHIP	1K	5%	1/10W
R428	1-216-073-00	RES,CHIP	10K	5%	1/10W
R429	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R430	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R431	1-216-073-00	RES,CHIP	10K	5%	1/10W
R432	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R433	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R434	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R435	1-216-097-91	RES,CHIP	100K	5%	1/10W
R436	1-216-097-91	RES,CHIP	100K	5%	1/10W
R437	1-216-097-91	RES,CHIP	100K	5%	1/10W
R438	1-216-097-91	RES,CHIP	100K	5%	1/10W
R439	1-216-097-91	RES,CHIP	100K	5%	1/10W
R440	1-216-097-91	RES,CHIP	100K	5%	1/10W
R441	1-216-097-91	RES,CHIP	100K	5%	1/10W
R442	1-216-097-91	RES,CHIP	100K	5%	1/10W
R443	1-216-111-00	RES,CHIP	390K	5%	1/10W
R445	1-216-097-91	RES,CHIP	100K	5%	1/10W
R446	1-216-089-91	RES,CHIP	47K	5%	1/10W
R447	1-216-025-91	RES,CHIP	100	5%	1/10W
R448	1-216-025-91	RES,CHIP	100	5%	1/10W
R449	1-216-025-91	RES,CHIP	100	5%	1/10W
R450	1-216-025-91	RES,CHIP	100	5%	1/10W
R451	1-216-097-91	RES,CHIP	100K	5%	1/10W
R452	1-216-097-91	RES,CHIP	100K	5%	1/10W
R453	1-216-097-91	RES,CHIP	100K	5%	1/10W
R454	1-216-097-91	RES,CHIP	100K	5%	1/10W
R455	1-216-097-91	RES,CHIP	100K	5%	1/10W
R456	1-216-295-91	SHORT	0		
R457	1-216-295-91	SHORT	0		
R458	1-216-073-00	RES,CHIP	10K	5%	1/10W
R460	1-216-073-00	RES,CHIP	10K	5%	1/10W
R461	1-216-073-00	RES,CHIP	10K	5%	1/10W
R462	1-216-073-00	RES,CHIP	10K	5%	1/10W
R463	1-216-073-00	RES,CHIP	10K	5%	1/10W
R464	1-216-097-91	RES,CHIP	100K	5%	1/10W
R465	1-216-089-91	RES,CHIP	47K	5%	1/10W
R480	1-216-097-91	RES,CHIP	100K	5%	1/10W
R481	1-216-097-91	RES,CHIP	100K	5%	1/10W
R482	1-216-097-91	RES,CHIP	100K	5%	1/10W
R483	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R484	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R489	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R490	1-216-295-91	SHORT	0		
R491	1-216-295-91	SHORT	0		
R492	1-216-295-91	SHORT	0		
R493	1-216-073-00	RES,CHIP	10K	5%	1/10W
R494	1-216-049-91	RES,CHIP	1K	5%	1/10W
R495	1-216-073-00	RES,CHIP	10K	5%	1/10W
R496	1-216-073-00	RES,CHIP	10K	5%	1/10W
R497	1-216-073-00	RES,CHIP	10K	5%	1/10W
R498	1-216-073-00	RES,CHIP	10K	5%	1/10W
R499	1-216-073-00	RES,CHIP	10K	5%	1/10W

Ref.No.	Part No.	Description			Remark
		<RELAY>			
RY101	1-755-358-11	RELAY			
RY401	1-755-359-11	RELAY			
		<CRYSTAL>			
X401	1-578-689-21	VIBRATOR (8MHz)			
**********					
	* A-1136-053-A	BHB COMPL (BKM-142HD) **********			
	* 1-526-652-21	SOCKET, IC (DP) 8P			
	7-682-947-01	SCREW+PSW 3X6			
		<CAPACITOR>			
C101	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C102	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C103	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C104	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C105	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C106	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C107	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C108	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C109	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C110	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C111	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C112	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C113	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C114	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C115	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C116	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C117	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C118	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C119	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C120	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C121	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C201	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C204	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C205	1-164-346-11	CERAMIC CHIP	1µF		16V
C206	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C207	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C208	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C209	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C210	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C211	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C212	1-135-216-11	TANTAL. CHIP	10µF	20%	10V
C214	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C215	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C216	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C217	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C218	1-107-869-11	ELECT	470µF	20%	6.3V
C219	1-135-216-11	TANTAL. CHIP	10µF	20%	10V
C220	1-126-394-11	ELECT CHIP	10µF	20%	16V
C221	1-126-403-11	ELECT CHIP	3.3µF	20%	50V
C222	1-126-394-11	ELECT CHIP	10µF	20%	16V
C223	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C224	1-104-551-11	FILM CHIP	0.01µF	5%	16V
C225	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C226	1-104-555-11	FILM CHIP	0.022µF	5%	16V
C227	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C228	1-126-401-21	ELECT CHIP	1µF	20%	50V
C229	1-126-394-11	ELECT CHIP	10µF	20%	16V
C231	1-107-884-11	ELECT	1000µF	20%	10V
C232	1-126-401-21	ELECT CHIP	1µF	20%	50V
C234	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C235	1-115-732-11	ELECT	330µF	20%	6.3V
C236	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C237	1-110-984-11	ELECT	680µF	20%	6.3V
C238	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C239	1-115-732-11	ELECT	330µF	20%	6.3V
C240	1-115-732-11	ELECT	330µF	20%	6.3V
C241	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C242	1-163-031-11	CERAMIC CHIP	0.01µF		50V
		<CONNECTOR>			
CN101	* 1-782-954-11	CONNECTOR, BOARD TO BOARD			
CN102	* 1-563-018-11	CONNECTOR, F.P.C 34P			
		<DIODE>			
D201	8-759-274-67	IC LM4040BIM3-5.0			
D202	8-719-059-22	DIODE NSQ03A06-TE16L			
D203	8-719-059-22	DIODE NSQ03A06-TE16L			
D204	8-719-158-15	DIODE RD5.6SB			
D205	8-719-158-15	DIODE RD5.6SB			
		<FERRITE BEAD>			
FB201	1-543-309-21	FERRITE	0µH		
FB202	1-410-396-41	FERRITE	0.45µH		
FB203	1-410-396-41	FERRITE	0.45µH		
		<FILTER>			
FL150	1-239-719-11	FERRITE	0µH		
FL151	1-239-719-11	FERRITE	0µH		
FL152	1-239-719-11	FERRITE	0µH		
FL153	1-239-719-11	FERRITE	0µH		
FL154	1-239-719-11	FERRITE	0µH		
FL155	1-239-719-11	FERRITE	0µH		
FL156	1-239-719-11	FERRITE	0µH		
FL157	1-239-719-11	FERRITE	0µH		
FL158	1-239-719-11	FERRITE	0µH		
FL159	1-239-719-11	FERRITE	0µH		
FL160	1-239-719-11	FERRITE	0µH		
FL161	1-239-719-11	FERRITE	0µH		
FL162	1-239-719-11	FERRITE	0µH		
FL163	1-239-719-11	FERRITE	0µH		
FL164	1-239-719-11	FERRITE	0µH		
FL165	1-239-719-11	FERRITE	0µH		
FL166	1-239-719-11	FERRITE	0µH		
FL167	1-239-719-11	FERRITE	0µH		
FL168	1-239-719-11	FERRITE	0µH		
FL169	1-239-719-11	FERRITE	0µH		
FL170	1-239-719-11	FERRITE	0µH		
FL171	1-239-719-11	FERRITE	0µH		
FL172	1-239-719-11	FERRITE	0µH		
		<IC>			
IC101	8-759-186-23	IC TC74VHC595F(EL)			
IC102	8-759-460-72	IC BA033FP-E2			
IC103	8-759-539-89	IC LM2990SX-5.0			
IC104	8-759-186-23	IC TC74VHC595F(EL)			
IC106	8-759-082-61	IC TC4W53FU			

Ref.No.	Part No.	Description				Remark
IC107	8-759-466-74	IC EPF8452AQC160-4				
IC108	8-759-082-61	IC TC4W53FU				
IC201	8-752-375-98	IC CXD2315Q				
IC202	8-752-369-84	IC CXD2309Q-T6				
IC203	8-759-929-26	IC TL431CPS				
IC204	8-759-929-26	IC TL431CPS				
IC205	8-759-261-48	IC TL1451ACPWR				
		<COIL>				
L201	1-408-615-31	INDUCTOR	100µH			
L202	1-414-700-11	INDUCTOR	47µH			
L203	1-414-700-11	INDUCTOR	47µH			
L204	1-414-700-11	INDUCTOR	47µH			
L205	1-414-700-11	INDUCTOR	47µH			
L206	1-412-537-11	NDUCTOR	100µH			
		<TRANSISTOR>				
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q203	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q204	1-801-806-11	TRANSISTOR DTC144EKA-T146				
Q205	1-801-806-11	TRANSISTOR DTC144EKA-T146				
Q206	1-801-806-11	TRANSISTOR DTC144EKA-T146				
Q207	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q208	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q209	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q210	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q211	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q212	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR				
Q213	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q214	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR				
Q215	8-729-322-45	TRANSISTOR 2SJ182S				
Q216	8-729-322-45	TRANSISTOR 2SJ182S				
		<RESISTOR>				
R100	1-218-895-11	METAL CHIP	100K	0.50%	1/16W	
R101	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R101	1-216-295-91	SHORT	0			
R102	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R102	1-216-295-91	SHORT	0			
R103	1-216-295-91	SHORT	0			
R103	1-216-295-91	SHORT	0			
R104	1-216-295-91	SHORT	0			
R104	1-216-295-91	SHORT	0			
R105	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R105	1-218-659-11	METAL CHIP	43	0.50%	1/16W	
R106	1-216-295-91	SHORT	0			
R106	1-218-659-11	METAL CHIP	43	0.50%	1/16W	
R108	1-216-295-91	SHORT	0			
R109	1-216-295-91	SHORT	0			
R110	1-216-295-91	SHORT	0			
R111	1-216-295-91	SHORT	0			
R112	1-216-295-91	SHORT	0			
R113	1-216-295-91	SHORT	0			
R114	1-216-295-91	SHORT	0			
R115	1-216-295-91	SHORT	0			
R116	1-216-295-91	SHORT	0			
R117	1-216-295-91	SHORT	0			
R118	1-216-295-91	SHORT	0			
R119	1-216-295-91	SHORT	0			
R120	1-216-295-91	SHORT	0			
R121	1-216-295-91	SHORT	0			
R122	1-216-295-91	SHORT	0			

Ref.No.	Part No.	Description				Remark
R123	1-216-295-91	SHORT	0			
R124	1-216-295-91	SHORT	0			
R125	1-216-295-91	SHORT	0			
R126	1-216-295-91	SHORT	0			
R127	1-216-295-91	SHORT	0			
R128	1-216-295-91	SHORT	0			
R129	1-216-295-91	SHORT	0			
R130	1-216-295-91	SHORT	0			
R131	1-216-295-91	SHORT	0			
R132	1-216-295-91	SHORT	0			
R133	1-216-295-91	SHORT	0			
R134	1-216-295-91	SHORT	0			
R135	1-216-295-91	SHORT	0			
R136	1-216-295-91	SHORT	0			
R137	1-216-295-91	SHORT	0			
R138	1-216-295-91	SHORT	0			
R139	1-216-295-91	SHORT	0			
R140	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R141	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R142	1-216-295-91	SHORT	0			
R143	1-216-295-91	SHORT	0			
R144	1-216-295-91	SHORT	0			
R145	1-216-295-91	SHORT	0			
R146	1-216-295-91	SHORT	0			
R147	1-216-295-91	SHORT	0			
R148	1-216-295-91	SHORT	0			
R149	1-216-295-91	SHORT	0			
R150	1-216-295-91	SHORT	0			
R151	1-216-295-91	SHORT	0			
R152	1-216-295-91	SHORT	0			
R153	1-216-295-91	SHORT	0			
R154	1-216-295-91	SHORT	0			
R155	1-216-295-91	SHORT	0			
R156	1-216-295-91	SHORT	0			
R157	1-216-295-91	SHORT	0			
R158	1-216-295-91	SHORT	0			
R159	1-216-295-91	SHORT	0			
R160	1-216-295-91	SHORT	0			
R161	1-216-295-91	SHORT	0			
R162	1-216-295-91	SHORT	0			
R163	1-216-295-91	SHORT	0			
R164	1-216-295-91	SHORT	0			
R165	1-216-295-91	SHORT	0			
R166	1-216-295-91	SHORT	0			
R167	1-216-295-91	SHORT	0			
R168	1-216-295-91	SHORT	0			
R169	1-216-295-91	SHORT	0			
R170	1-216-295-91	SHORT	0			
R171	1-216-295-91	SHORT	0			
R172	1-216-295-91	SHORT	0			
R174	1-216-295-91	SHORT	0			
R180	1-216-295-91	SHORT	0			
R181	1-216-295-91	SHORT	0			
R182	1-216-295-91	SHORT	0			
R201	1-216-043-91	RES,CHIP	560	5%	1/10W	
R202	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R203	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R204	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R205	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R206	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R207	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R208	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R209	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R210	1-216-634-11	METAL CHIP	200	0.50%	1/10W	
R211	1-216-634-11	METAL CHIP	200	0.50%	1/10W	

Ref.No.	Part No.	Description			Remark
R212	1-216-073-00	RES,CHIP	10K	5%	1/10W
R213	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R214	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R215	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R216	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R217	1-216-045-00	RES,CHIP	680	5%	1/10W
R218	1-216-045-00	RES,CHIP	680	5%	1/10W
R219	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R220	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R221	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R222	1-218-754-11	METAL CHIP	120K	0.50%	1/10W
R223	1-216-295-91	SHORT	0		
R224	1-216-089-91	RES,CHIP	47K	5%	1/10W
R225	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R226	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R227	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R228	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R229	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R230	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R231	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R232	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R233	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R234	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R235	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R236	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R237	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R238	1-216-009-91	RES,CHIP	22	5%	1/10W
R239	1-216-009-91	RES,CHIP	22	5%	1/10W

****

Ref.No.	Part No.	Description			Remark
	* A-1136-012-A	BW COMPL (BKM-127W)			
		**********			
		<CAPACITOR>			
C2	1-107-715-11	ELECT	22µF	20%	16V
C4	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C12	1-107-715-11	ELECT	22µF	20%	16V
C22	1-107-715-11	ELECT	22µF	20%	16V
C23	1-126-933-11	ELECT	100µF	20%	16V
C24	1-126-933-11	ELECT	100µF	20%	16V
C25	1-163-021-91	CERAMIC CHIP	0.01µF	10%	16V
C31	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C32	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C33	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C34	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C35	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C36	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C101	1-126-933-11	ELECT	100µF	20%	16V
C120	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C121	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C122	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C123	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C123	1-164-048-91	CERAMIC CHIP	12PF	5%	50V
C124	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C125	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C126	1-126-934-11	ELECT	220µF	20%	16V
C127	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C128	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C129	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C130	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C131	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C132	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C133	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C134	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C135	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C136	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C137	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C138	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C139	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C140	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C141	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C151	1-126-933-11	ELECT	100µF	20%	16V
C152	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C153	1-126-933-11	ELECT	100µF	20%	16V
C154	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C155	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C181	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C182	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C183	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C184	1-164-690-91	CERAMIC CHIP	0.0022µF	5%	50V
C185	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C186	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C187	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C201	1-126-933-11	ELECT	100µF	20%	16V
C202	1-126-933-11	ELECT	100µF	20%	16V
C203	1-126-933-11	ELECT	100µF	20%	16V
C204	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C205	1-126-933-11	ELECT	100µF	20%	16V
C261	1-126-933-11	ELECT	100µF	20%	16V
C262	1-163-933-91	CERAMIC CHIP	0.01µF	10%	50V
C263	1-126-933-11	ELECT	100µF	20%	16V
C264	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C301	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C302	1-163-245-11	CERAMIC CHIP	56PF	5%	50V

Ref.No.	Part No.	Description			Remark
C303	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C304	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C305	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C306	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C307	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C321	1-163-143-00	CERAMIC CHIP	0.0012µF	5%	50V
C322	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C323	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C324	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C325	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C326	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C327	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C328	1-126-934-11	ELECT	200µF	20%	16V
C329	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C330	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C331	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C332	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C333	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C334	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C335	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C336	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C337	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C338	1-126-934-11	ELECT	200µF	20%	16V
C339	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C340	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C341	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C342	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C343	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C344	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C345	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C361	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C362	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C363	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C401	1-126-933-11	ELECT	100µF	20%	16V
C402	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C403	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C404	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C405	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C406	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C407	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C408	1-107-715-11	ELECT	22µF	20%	50V
C409	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C410	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C421	1-126-933-11	ELECT	100µF	20%	16V
C422	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C423	1-126-933-11	ELECT	100µF	20%	16V
C424	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C451	1-126-933-11	ELECT	100µF	20%	16V
C452	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C453	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C454	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C455	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C456	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C457	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C458	1-107-715-11	ELECT	22µF	20%	50V
C459	1-163-107-11	CERAMIC CHIP	0.001µF	5%	50V
C471	1-126-933-11	ELECT	100µF	20%	16V
C472	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C473	1-126-933-11	ELECT	100µF	20%	16V
C474	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C551	1-126-933-11	ELECT	100µF	20%	16V
C554	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C555	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C556	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C557	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C558	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C601	1-126-933-11	ELECT	100µF	20%	16V
C602	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C603	1-126-933-11	ELECT	100µF	20%	16V
C604	1-126-933-11	ELECT	100µF	20%	16V
C605	1-126-933-11	ELECT	100µF	20%	16V
C606	1-126-933-11	ELECT	100µF	20%	16V
C611	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C612	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C613	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C614	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C615	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C616	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C617	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C618	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C619	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C620	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C621	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C622	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C623	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C629	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C630	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C701	1-126-933-11	ELECT	100µF	20%	16V
C702	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C703	1-126-933-11	ELECT	100µF	20%	16V
C704	1-126-933-11	ELECT	100µF	20%	16V
C705	1-126-933-11	ELECT	100µF	20%	16V
C706	1-126-933-11	ELECT	100µF	20%	16V
C711	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C712	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C713	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C714	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C715	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C716	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C717	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C718	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C719	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C720	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C722	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C723	1-163-038-91	CERAMIC CHIP	0.1µF		25V

<CONNECTOR>

CN1	1-694-600-11	TERMINAL BOARD ASSY, I/O
CN2	1-566-849-11	CONNECTOR, (S) TERMINAL 4P
CN3	* 1-793-303-11	CONNECTOR, ROUND TYPE (SVIDEO)
CN4	* 1-774-523-11	PIN, CONNECTOR (PC BOARD) 64P

<DIODE>

D1	8-719-073-01	DIODE MA111-(K8).S0
D11	8-719-073-01	DIODE MA111-(K8).S0
D21	8-719-073-01	DIODE MA111-(K8).S0
D31	8-719-073-01	DIODE MA111-(K8).S0
D261	8-719-073-01	DIODE MA111-(K8).S0
D264	8-719-073-01	DIODE MA111-(K8).S0
D301	8-719-002-81	DIODE 1T363
D321	8-719-045-70	DIODE 1SV230TPH3
D361	8-719-002-81	DIODE 1T363
D401	8-719-801-78	DIODE 1SS184
D421	8-719-073-01	DIODE MA111-(K8).S0
D424	8-719-073-01	DIODE MA111-(K8).S0
D471	8-719-073-01	DIODE MA111-(K8).S0
D474	8-719-073-01	DIODE MA111-(K8).S0
D501	8-719-158-19	DIODE RD6.2SB
D502	8-719-073-01	DIODE MA111-(K8).S0

Ref.No.	Part No.	Description	Remark
		<DELAY LINE>	
DL201	1-411-457-11	DELAY LINE	
DL202	1-402-770-11	DELAY LINE	
DL221	1-411-451-11	DELAY LINE	
		<FILTER>	
FL101	1-239-289-11	FILTER, LOW PASS	
FL141	1-239-289-11	FILTER, LOW PASS	
FL161	1-239-289-11	FILTER, LOW PASS	
FL501	1-239-183-11	FILTER, EMI	
FL551	1-239-480-11	FILTER, EMI	
FL552	1-239-480-11	FILTER, EMI	
		<IC>	
IC1	8-759-242-64	IC TC4W53F	
IC11	8-759-242-64	IC TC4W53F	
IC21	8-759-710-86	IC NJM2233BM	
IC31	8-759-710-86	IC NJM2233BM	
IC101	8-759-242-64	IC TC4W53F	
IC121	8-752-372-78	IC CXD2024AQ	
IC122	8-752-367-59	IC CXD2309Q	
IC181	8-759-514-57	IC BA7046F	
IC182	8-759-239-34	IC TC74HC4538AF	
IC201	8-759-710-86	IC NJM2233BM	
IC261	8-752-053-21	IC CXA1211M	
IC301	8-759-631-08	IC M51279FP	
IC302	8-759-710-86	IC NJM2233BM	
IC361	8-759-983-69	IC LM358PS	
IC401	8-759-565-20	IC TDA4665T/V5-118	
IC402	8-759-710-86	IC NJM2233BM	
IC421	8-752-053-21	IC CXA1211M	
IC451	8-759-710-86	IC NJM2233BM	
IC501	8-759-594-41	IC MB89613R-651	
IC502	8-759-186-44	IC TC74VHC125F	
IC503	8-759-156-54	IC X25040SI	
IC504	8-759-064-36	IC MB88346BPFV	
IC601	8-759-460-74	IC BA05FP-E2	
IC701	8-759-539-89	IC LM2990SX-5.0	
		<COIL>	
L1	1-216-295-91	SHORT 0	
L2	1-216-295-91	SHORT 0	
L11	1-216-295-91	SHORT 0	
L12	1-216-295-91	SHORT 0	
L121	1-410-470-11	INDUCTOR 10µH	
		<TRANSISTOR>	
Q1	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q11	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q21	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q31	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q103	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q121	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q141	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q142	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q143	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q144	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q161	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q162	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q163	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q164	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q202	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q203	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q221	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q223	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q224	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q241	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q261	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q263	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q264	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q303	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q305	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q321	8-729-116-05	TRANSISTOR 2SK160-K5	
Q322	8-729-116-05	TRANSISTOR 2SK160-K5	
Q323	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q324	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q325	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q326	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q361	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q362	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q363	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q364	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q403	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q404	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q421	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q424	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q451	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q452	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q453	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q454	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q471	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q474	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q501	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q502	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q503	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q504	8-729-027-38	TRANSISTOR DTA144EKA-T146	
		<RESISTOR>	
R1	1-214-837-11	METAL 75 1% 1/2W	
R2	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R3	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R4	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R11	1-214-837-11	METAL 75 1% 1/2W	
R12	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R13	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R14	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R21	1-214-837-11	METAL 75 1% 1/2W	
R22	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R23	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R24	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R25	1-216-025-91	RES,CHIP 100 5% 1/10W	
R26	1-216-025-91	RES,CHIP 100 5% 1/10W	
R31	1-214-837-11	METAL 75 1% 1/2W	
R32	1-216-089-91	RES,CHIP 47K 5% 1/10W	
R33	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R34	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R35	1-216-025-91	RES,CHIP 100 5% 1/10W	
R36	1-216-025-91	RES,CHIP 100 5% 1/10W	

Ref.No.	Part No.	Description			Remark
R101	1-216-025-91	RES,CHIP	100	5%	1/10W
R102	1-216-089-91	RES,CHIP	47K	5%	1/10W
R103	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R104	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R105	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R106	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R107	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R108	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R109	1-216-073-00	RES,CHIP	10K	5%	1/10W
R110	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R111	1-216-025-91	RES,CHIP	100	5%	1/10W
R112	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R121	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R122	1-216-079-00	RES,CHIP	18K	5%	1/10W
R123	1-216-021-00	RES,CHIP	68	5%	1/10W
R127	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R131	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R132	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R133	1-216-073-00	RES,CHIP	10K	5%	1/10W
R134	1-216-073-00	RES,CHIP	10K	5%	1/10W
R135	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R136	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R137	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R141	1-216-031-00	RES,CHIP	180	5%	1/10W
R142	1-216-049-91	RES,CHIP	1K	5%	1/10W
R143	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R144	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R145	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R146	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R147	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R148	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R149	1-216-049-91	RES,CHIP	1K	5%	1/10W
R150	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R151	1-216-025-91	RES,CHIP	100	5%	1/10W
R153	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R154	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R161	1-216-031-00	RES,CHIP	180	5%	1/10W
R162	1-216-049-91	RES,CHIP	1K	5%	1/10W
R163	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R164	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R165	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R166	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R167	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R168	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R169	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R170	1-216-025-91	RES,CHIP	100	5%	1/10W
R171	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R172	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R181	1-216-100-00	RES,CHIP	130K	5%	1/10W
R182	1-216-073-00	RES,CHIP	10K	5%	1/10W
R183	1-216-037-00	RES,CHIP	330	5%	1/10W
R184	1-216-113-00	RES,CHIP	470K	5%	1/10W
R185	1-216-113-00	RES,CHIP	470K	5%	1/10W
R186	1-216-073-00	RES,CHIP	10K	5%	1/10W
R187	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R188	1-216-676-11	METAL CHIP	11K	0.50%	1/10W
R189	1-216-097-91	RES,CHIP	100K	5%	1/10W
R190	1-216-097-91	RES,CHIP	100K	5%	1/10W
R201	1-216-025-91	RES,CHIP	100	5%	1/10W
R202	1-216-089-91	RES,CHIP	47K	5%	1/10W
R203	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R204	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R205	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R206	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R207	1-216-025-91	RES,CHIP	100	5%	1/10W

Ref.No.	Part No.	Description			Remark
R208	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R209	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R210	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R211	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R212	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R213	1-216-025-91	RES,CHIP	100	5%	1/10W
R214	1-216-025-91	RES,CHIP	100	5%	1/10W
R221	1-216-025-91	RES,CHIP	100	5%	1/10W
R222	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R223	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R224	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R226	1-216-025-91	RES,CHIP	100	5%	1/10W
R229	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R231	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R232	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R233	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R241	1-216-089-91	RES,CHIP	47K	5%	1/10W
R242	1-216-025-91	RES,CHIP	100	5%	1/10W
R243	1-216-049-91	RES,CHIP	1K	5%	1/10W
R261	1-216-025-91	RES,CHIP	100	5%	1/10W
R263	1-216-089-91	RES,CHIP	47K	5%	1/10W
R264	1-216-085-00	RES,CHIP	33K	5%	1/10W
R265	1-216-073-00	RES,CHIP	10K	5%	1/10W
R266	1-216-025-91	RES,CHIP	100	5%	1/10W
R267	1-216-097-91	RES,CHIP	100K	5%	1/10W
R268	1-216-025-91	RES,CHIP	100	5%	1/10W
R269	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R271	1-216-081-00	RES,CHIP	22K	5%	1/10W
R272	1-216-013-00	RES,CHIP	33	5%	1/10W
R301	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R302	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R303	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R304	1-216-049-91	RES,CHIP	1K	5%	1/10W
R305	1-216-049-91	RES,CHIP	1K	5%	1/10W
R306	1-216-033-00	RES,CHIP	220	5%	1/10W
R307	1-216-049-91	RES,CHIP	1K	5%	1/10W
R308	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R309	1-216-049-91	RES,CHIP	1K	5%	1/10W
R310	1-216-033-00	RES,CHIP	220	5%	1/10W
R311	1-216-049-91	RES,CHIP	1K	5%	1/10W
R312	1-216-121-91	RES,CHIP	1M	5%	1/10W
R313	1-216-121-91	RES,CHIP	1M	5%	1/10W
R314	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R315	1-216-025-91	RES,CHIP	100	5%	1/10W
R317	1-216-025-91	RES,CHIP	100	5%	1/10W
R321	1-216-103-00	RES,CHIP	180K	5%	1/10W
R322	1-216-077-91	RES,CHIP	15K	5%	1/10W
R323	1-216-081-00	RES,CHIP	22K	5%	1/10W
R324	1-216-081-00	RES,CHIP	22K	5%	1/10W
R325	1-216-085-00	RES,CHIP	33K	5%	1/10W
R326	1-216-073-00	RES,CHIP	10K	5%	1/10W
R327	1-216-073-00	RES,CHIP	10K	5%	1/10W
R328	1-216-097-91	RES,CHIP	100K	5%	1/10W
R329	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R330	1-216-113-00	RES,CHIP	470K	5%	1/10W
R331	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R332	1-216-121-91	RES,CHIP	1M	5%	1/10W
R333	1-216-121-91	RES,CHIP	1M	5%	1/10W
R334	1-216-097-91	RES,CHIP	100K	5%	1/10W
R335	1-216-097-91	RES,CHIP	100K	5%	1/10W
R336	1-216-121-91	RES,CHIP	1M	5%	1/10W
R337	1-216-121-91	RES,CHIP	1M	5%	1/10W
R339	1-216-037-00	RES,CHIP	330	5%	1/10W
R340	1-216-017-91	RES,CHIP	47	5%	1/10W

Ref.No.	Part No.	Description			Remark
R341	1-216-097-91	RES,CHIP	100K	5%	1/10W
R342	1-216-105-91	RES,CHIP	220K	5%	1/10W
R343	1-216-091-00	RES,CHIP	56K	5%	1/10W
R344	1-216-091-00	RES,CHIP	56K	5%	1/10W
R345	1-216-049-91	RES,CHIP	1K	5%	1/10W
R346	1-216-049-91	RES,CHIP	1K	5%	1/10W
R347	1-216-073-00	RES,CHIP	10K	5%	1/10W
R348	1-216-097-91	RES,CHIP	100K	5%	1/10W
R349	1-216-089-91	RES,CHIP	47K	5%	1/10W
R350	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R351	1-216-049-91	RES,CHIP	1K	5%	1/10W
R352	1-216-073-00	RES,CHIP	10K	5%	1/10W
R353	1-216-049-91	RES,CHIP	1K	5%	1/10W
R354	1-216-073-00	RES,CHIP	10K	5%	1/10W
R355	1-216-095-00	RES,CHIP	82K	5%	1/10W
R361	1-216-025-91	RES,CHIP	100	5%	1/10W
R362	1-216-049-91	RES,CHIP	1K	5%	1/10W
R363	1-216-033-00	RES,CHIP	220	5%	1/10W
R364	1-216-049-91	RES,CHIP	1K	5%	1/10W
R365	1-216-121-91	RES,CHIP	1M	5%	1/10W
R366	1-216-121-91	RES,CHIP	1M	5%	1/10W
R367	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R368	1-216-025-91	RES,CHIP	100	5%	1/10W
R369	1-216-049-91	RES,CHIP	1K	5%	1/10W
R370	1-216-033-00	RES,CHIP	220	5%	1/10W
R371	1-216-049-91	RES,CHIP	1K	5%	1/10W
R372	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R373	1-216-049-91	RES,CHIP	1K	5%	1/10W
R374	1-216-073-00	RES,CHIP	10K	5%	1/10W
R401	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R402	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R403	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R404	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R405	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R406	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R407	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R408	1-216-025-91	RES,CHIP	100	5%	1/10W
R409	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R410	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R411	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R412	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R413	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R414	1-216-025-91	RES,CHIP	100	5%	1/10W
R415	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R416	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R417	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R418	1-216-097-91	RES,CHIP	100K	5%	1/10W
R421	1-216-049-91	RES,CHIP	1K	5%	1/10W
R422	1-216-089-91	RES,CHIP	47K	5%	1/10W
R423	1-216-085-00	RES,CHIP	33K	5%	1/10W
R424	1-216-073-00	RES,CHIP	10K	5%	1/10W
R425	1-216-025-91	RES,CHIP	100	5%	1/10W
R426	1-216-097-91	RES,CHIP	100K	5%	1/10W
R427	1-216-025-91	RES,CHIP	100	5%	1/10W
R428	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R430	1-216-081-00	RES,CHIP	22K	5%	1/10W
R431	1-216-013-00	RES,CHIP	33	5%	1/10W
R451	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R452	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R453	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R454	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R455	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R456	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R457	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R458	1-216-025-91	RES,CHIP	100	5%	1/10W
R459	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R460	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R461	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R462	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R463	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R464	1-216-025-91	RES,CHIP	100	5%	1/10W
R465	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R466	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R467	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R471	1-216-049-91	RES,CHIP	1K	5%	1/10W
R472	1-216-089-91	RES,CHIP	47K	5%	1/10W
R473	1-216-085-00	RES,CHIP	33K	5%	1/10W
R474	1-216-073-00	RES,CHIP	10K	5%	1/10W
R475	1-216-025-91	RES,CHIP	100	5%	1/10W
R476	1-216-097-91	RES,CHIP	100K	5%	1/10W
R477	1-216-025-91	RES,CHIP	100	5%	1/10W
R478	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R480	1-216-081-00	RES,CHIP	22K	5%	1/10W
R481	1-216-013-00	RES,CHIP	33	5%	1/10W
R501	1-216-097-91	RES,CHIP	100K	5%	1/10W
R502	1-216-025-91	RES,CHIP	100	5%	1/10W
R503	1-216-025-91	RES,CHIP	100	5%	1/10W
R504	1-216-097-91	RES,CHIP	100K	5%	1/10W
R505	1-216-025-91	RES,CHIP	100	5%	1/10W
R506	1-216-097-91	RES,CHIP	100K	5%	1/10W
R507	1-216-025-91	RES,CHIP	100	5%	1/10W
R508	1-216-097-91	RES,CHIP	100K	5%	1/10W
R509	1-216-097-91	RES,CHIP	100K	5%	1/10W
R510	1-216-097-91	RES,CHIP	100K	5%	1/10W
R511	1-216-097-91	RES,CHIP	100K	5%	1/10W
R512	1-216-097-91	RES,CHIP	100K	5%	1/10W
R513	1-216-097-91	RES,CHIP	100K	5%	1/10W
R514	1-216-097-91	RES,CHIP	100K	5%	1/10W
R515	1-216-097-91	RES,CHIP	100K	5%	1/10W
R516	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R519	1-216-049-91	RES,CHIP	1K	5%	1/10W
R520	1-216-073-00	RES,CHIP	10K	5%	1/10W
R521	1-216-073-00	RES,CHIP	10K	5%	1/10W
R522	1-216-073-00	RES,CHIP	10K	5%	1/10W
R523	1-216-073-00	RES,CHIP	10K	5%	1/10W
R524	1-216-073-00	RES,CHIP	10K	5%	1/10W
R525	1-216-073-00	RES,CHIP	10K	5%	1/10W
R526	1-216-073-00	RES,CHIP	10K	5%	1/10W
R527	1-216-073-00	RES,CHIP	10K	5%	1/10W
R528	1-216-025-91	RES,CHIP	100	5%	1/10W

<CRYSTAL>

X321	1-527-722-00	VIBRATOR, CRYSTAL (3.58 MHz)
X322	1-577-259-11	VIBRATOR, CRYSTAL (4.43MHz)
X501	1-578-689-21	VIBRATOR (8MHz)

****

Ref.No.	Part No.	Description			Remark
	* A-1136-013-A	BX COMPL (BKM-129X) **********			
		<CAPACITOR>			
C010	1-128-526-11	ELECT	100µF	20%	16V
C011	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C012	1-128-526-11	ELECT	100µF	20%	16V
C013	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C014	1-128-526-11	ELECT	100µF	20%	16V
C015	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C016	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C017	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C018	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C019	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C020	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C021	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C022	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C050	1-128-526-11	ELECT	100µF	20%	16V
C051	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C052	1-128-526-11	ELECT	100µF	20%	16V
C053	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C054	1-128-526-11	ELECT	100µF	20%	16V
C055	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C056	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C057	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C058	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C059	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C060	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C061	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C062	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C101	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C102	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C103	1-107-701-11	ELECT	47µF	20%	16V
C104	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C106	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C201	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C202	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C203	1-107-701-11	ELECT	47µF	20%	16V
C204	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C206	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C301	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C302	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C303	1-107-701-11	ELECT	47µF	20%	16V
C304	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C306	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C401	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C402	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C403	1-107-701-11	ELECT	47µF	20%	16V
C404	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C501	1-128-526-11	ELECT	100µF	20%	16V
C502	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C503	1-163-038-91	CERAMIC CHIP	0.1µF		25V
		<CONNECTOR>			
CN001	* 1-774-523-11	PIN, CONNECTOR (PC BOARD) 64P			
		<DIODE>			
D101	8-719-073-01	DIODE MA111-(K8).S0			
D102	8-719-073-01	DIODE MA111-(K8).S0			
D201	8-719-073-01	DIODE MA111-(K8).S0			
D202	8-719-073-01	DIODE MA111-(K8).S0			
D301	8-719-073-01	DIODE MA111-(K8).S0			
D302	8-719-073-01	DIODE MA111-(K8).S0			
D401	8-719-073-01	DIODE MA111-(K8).S0			
D402	8-719-073-01	DIODE MA111-(K8).S0			
D501	8-719-158-19	DIODE RD6.2SB			
		<FILTER>			
FL501	1-239-183-11	FILTER, EMI			
FL502	1-239-480-11	FILTER, EMI			
FL503	1-239-480-11	FILTER, EMI			
		<IC>			
IC010	8-759-460-74	IC BA05FP-E2			
IC050	8-759-539-89	IC LM2990SX-5.0			
IC501	8-759-594-41	IC MB89613R-651			
IC502	8-759-186-44	IC TC74VHC125F			
IC503	8-759-156-54	IC X25040SI			
		<TRANSISTOR>			
Q101	8-729-112-65	TRANSISTOR 2SA1462-Y33			
Q102	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q103	8-729-107-31	TRANSISTOR 2SC3545-T43			
Q201	8-729-112-65	TRANSISTOR 2SA1462-Y33			
Q202	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q203	8-729-107-31	TRANSISTOR 2SC3545-T43			
Q301	8-729-112-65	TRANSISTOR 2SA1462-Y33			
Q302	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q303	8-729-107-31	TRANSISTOR 2SC3545-T43			
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q402	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q403	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q404	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q501	1-801-806-11	TRANSISTOR DTC144EKA-T146			
		<RESISTOR>			
R101	1-214-837-11	METAL	75	1%	1/2W
R102	1-216-089-91	RES,CHIP	47K	5%	1/10W
R103	1-216-025-91	RES,CHIP	100	5%	1/10W
R104	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R105	1-216-097-91	RES,CHIP	100K	5%	1/10W
R106	1-216-009-91	RES,CHIP	22	5%	1/10W
R107	1-216-025-91	RES,CHIP	100	5%	1/10W
R108	1-216-097-91	RES,CHIP	100K	5%	1/10W
R109	1-216-013-00	RES,CHIP	33	5%	1/10W
R201	1-214-837-11	METAL	75	1%	1/2W
R202	1-216-089-91	RES,CHIP	47K	5%	1/10W
R203	1-216-025-91	RES,CHIP	100	5%	1/10W
R204	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R205	1-216-097-91	RES,CHIP	100K	5%	1/10W
R206	1-216-009-91	RES,CHIP	22	5%	1/10W
R207	1-216-025-91	RES,CHIP	100	5%	1/10W
R208	1-216-097-91	RES,CHIP	100K	5%	1/10W
R209	1-216-013-00	RES,CHIP	33	5%	1/10W
R301	1-214-837-11	METAL	75	1%	1/2W
R302	1-216-089-91	RES,CHIP	47K	5%	1/10W
R303	1-216-025-91	RES,CHIP	100	5%	1/10W
R304	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R305	1-216-097-91	RES,CHIP	100K	5%	1/10W
R306	1-216-009-91	RES,CHIP	22	5%	1/10W
R307	1-216-025-91	RES,CHIP	100	5%	1/10W
R308	1-216-097-91	RES,CHIP	100K	5%	1/10W
R309	1-216-013-00	RES,CHIP	33	5%	1/10W
R401	1-214-837-11	METAL	75	1%	1/2W
R402	1-216-089-91	RES,CHIP	47K	5%	1/10W
R403	1-216-049-91	RES,CHIP	1K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R404	1-216-097-91	RES,CHIP	100K	5%	1/10W
R405	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R406	1-216-009-91	RES,CHIP	22	5%	1/10W
R407	1-216-025-91	RES,CHIP	100	5%	1/10W
R408	1-216-097-91	RES,CHIP	100K	5%	1/10W
R409	1-216-013-00	RES,CHIP	33	5%	1/10W
R410	1-216-097-91	RES,CHIP	100K	5%	1/10W
R501	1-216-097-91	RES,CHIP	100K	5%	1/10W
R502	1-216-025-91	RES,CHIP	100	5%	1/10W
R503	1-216-025-91	RES,CHIP	100	5%	1/10W
R504	1-216-097-91	RES,CHIP	100K	5%	1/10W
R505	1-216-025-91	RES,CHIP	100	5%	1/10W
R506	1-216-097-91	RES,CHIP	100K	5%	1/10W
R507	1-216-025-91	RES,CHIP	100	5%	1/10W
R508	1-216-097-91	RES,CHIP	100K	5%	1/10W
R509	1-216-097-91	RES,CHIP	100K	5%	1/10W
R510	1-216-097-91	RES,CHIP	100K	5%	1/10W
R511	1-216-097-91	RES,CHIP	100K	5%	1/10W
R512	1-216-097-91	RES,CHIP	100K	5%	1/10W
R513	1-216-097-91	RES,CHIP	100K	5%	1/10W
R514	1-216-097-91	RES,CHIP	100K	5%	1/10W
R515	1-216-097-91	RES,CHIP	100K	5%	1/10W
R516	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R517	1-216-097-91	RES,CHIP	100K	5%	1/10W
R518	1-216-097-91	RES,CHIP	100K	5%	1/10W
		<TERMINAL BOARD>			
TB001	1-694-601-11	TERMINAL BOARD ASSY, I/O			
		<TEST PIN>			
TP001	* 1-537-864-11	PIN, POST			
TP010	* 1-537-864-11	PIN, POST			
		<CRYSTAL>			
X501	1-578-689-21	VIBRATOR (8MHz)			

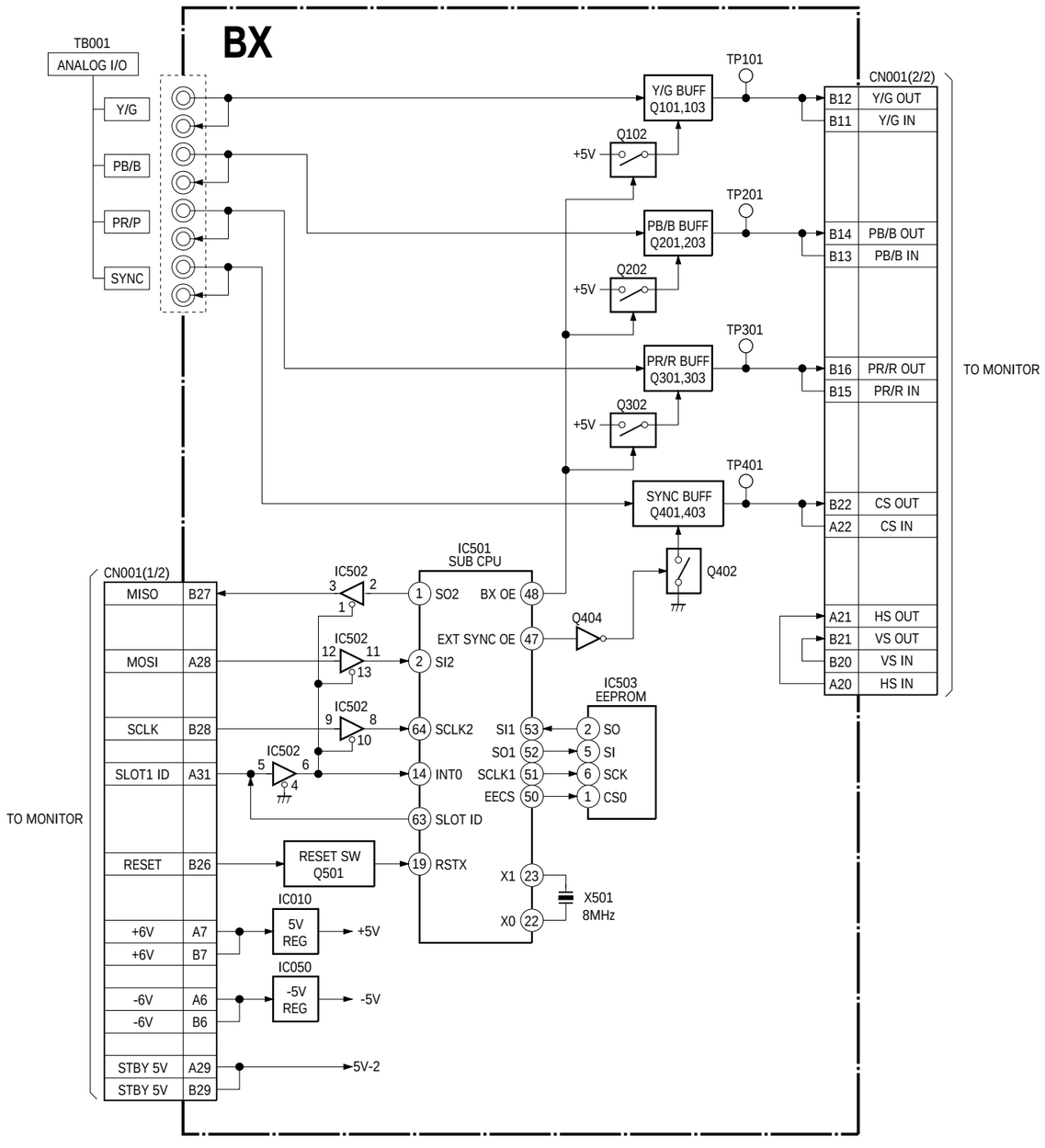
****

ACCESSORIES
****

	3-867-934-01	MANUAL, OPERATION (JAPANESE, ENGLISH)
	4-073-239-01	HOLDER (142HD)
	4-073-242-01	HOLDER (120D, 127W, 129X)

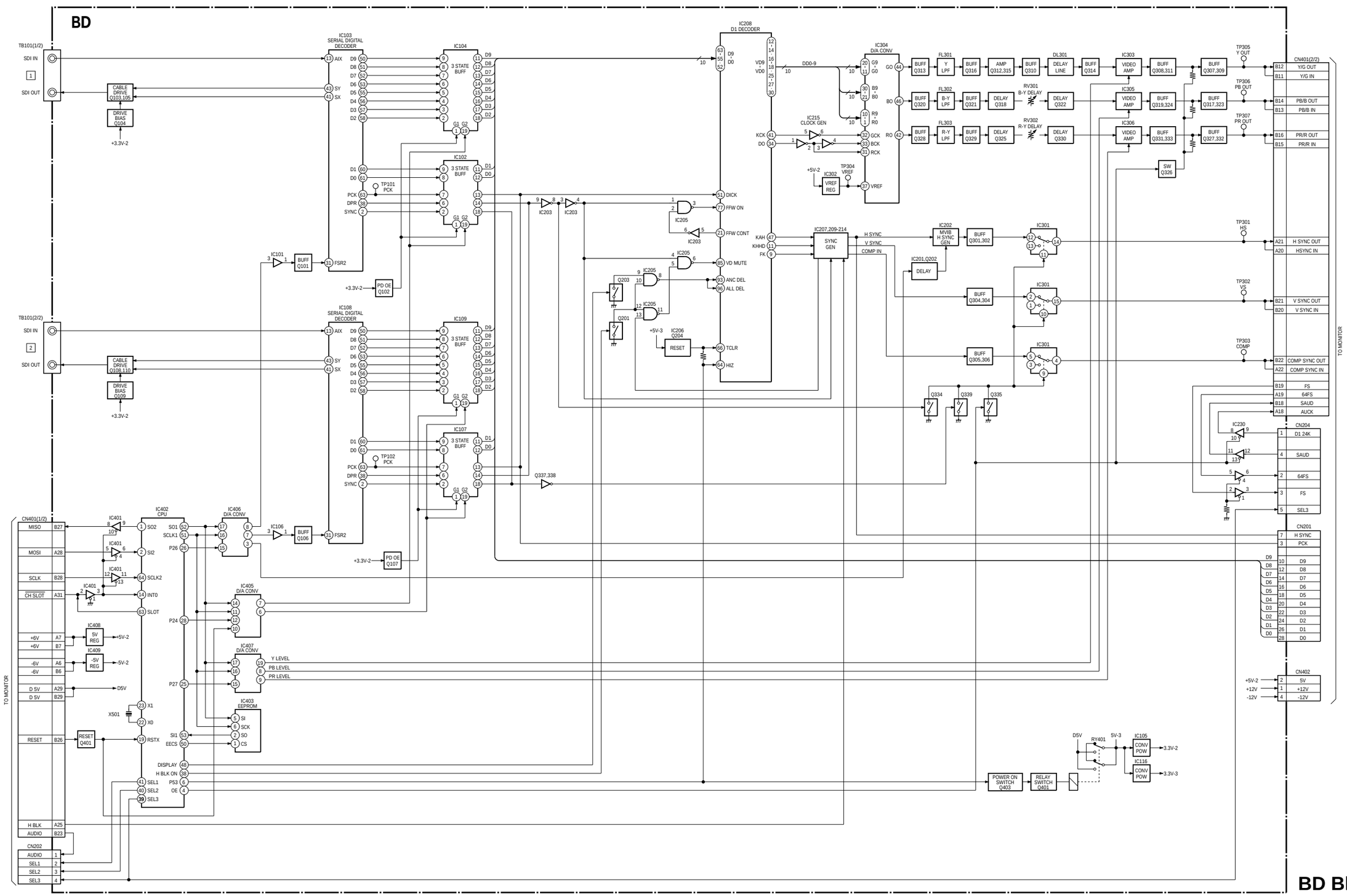
Section 6
Block Diagrams

BX Block



BX Block

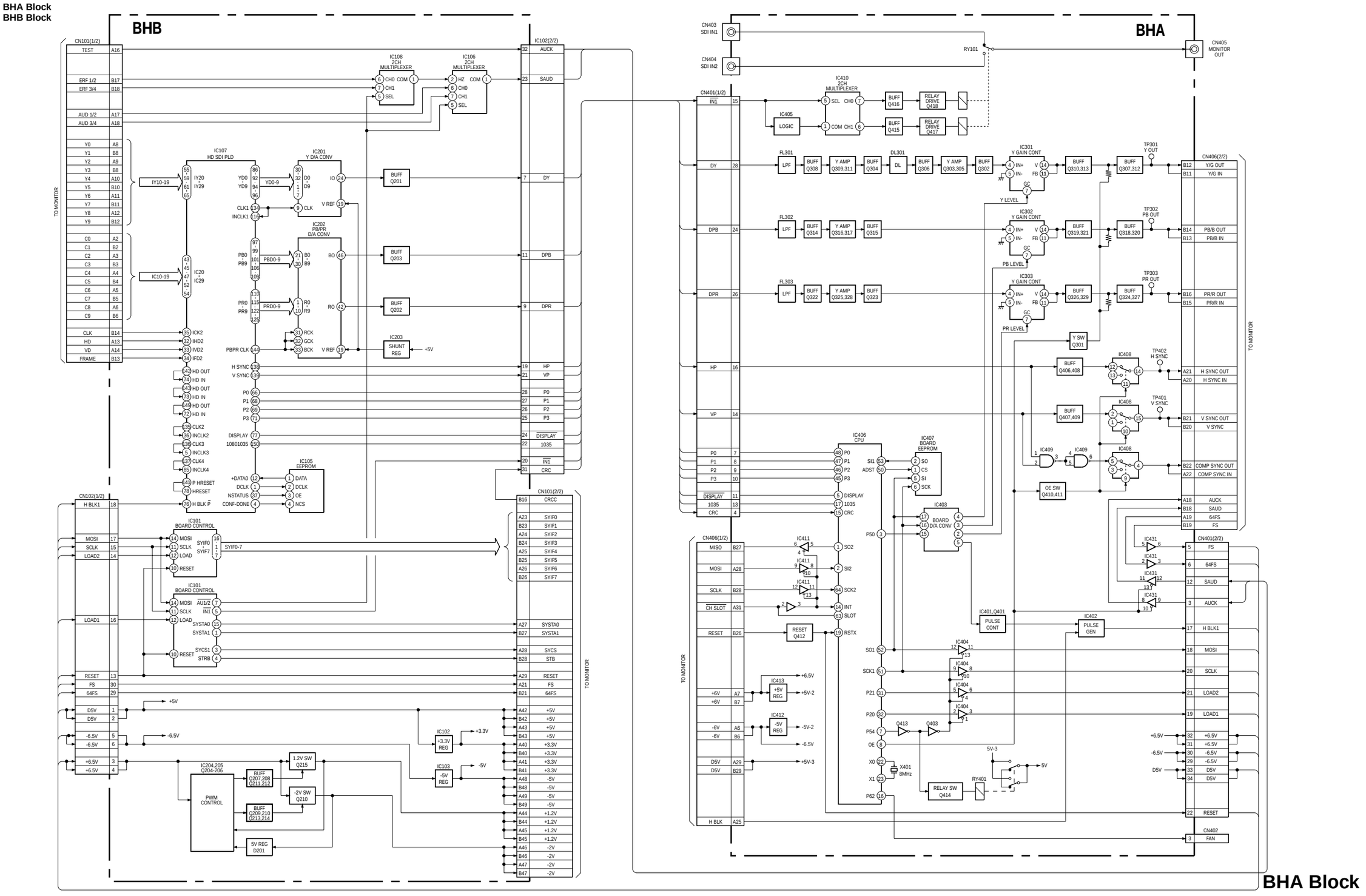
BD Block



BD Block

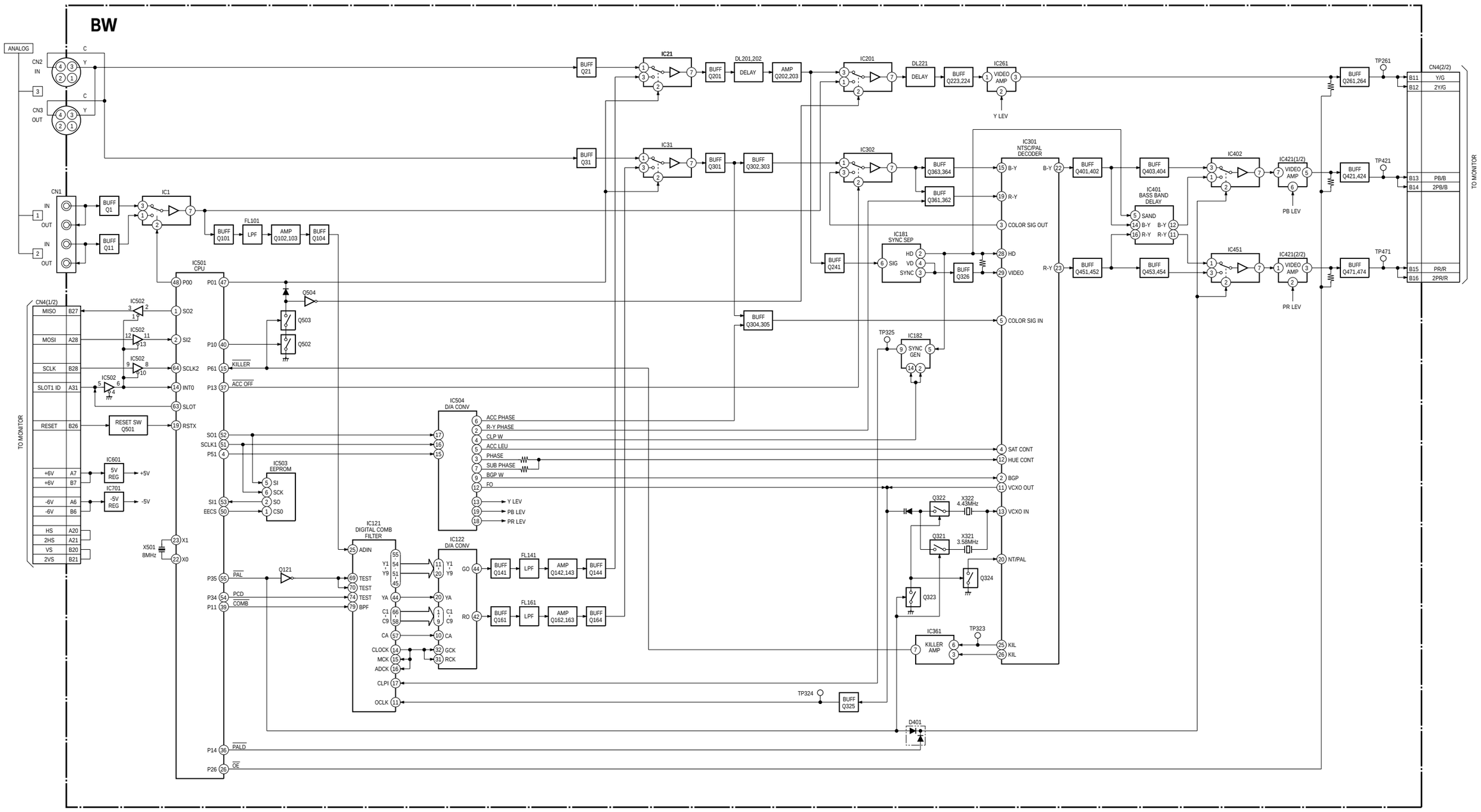
BHA, BHB BKM-142HD

BHA Block
BHB Block



BHA Block
BHB Block

BW Block



BW Block

Section 7
Diagrams

Note:

- Parts marked " * " differ according to the model/destination. Refer to the mount table for each function.
- The parts marked " # " on schematic diagrams are not mounted.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics.
- All electrolytics are in 50 V unless otherwise specified.
-  : fusible resistor
- : nonflammable resistor
- Δ : internal component
-  : panel designation and adjustment for repair
- Caution when replacing chip parts
  New parts must be attached after removal of the chip.
  Be careful not to heat the minus side of a tantalum capacitor, because it is easily damaged by the heat.

Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

[Measuring conditions, voltage and waveform]

- A voltage value is the reference value between the measurement point and the earth, when the RGB color bar signal are received from the color bar generator (digital multi-meter used: 10 M ohms/V DC).
- Unit of voltage is V (volt).
-  : B+line
   : B– line
- Voltage variations may occur due to normal production tolerances.
- Circled numbers indicate the reference waveform.
-  : Signal path.

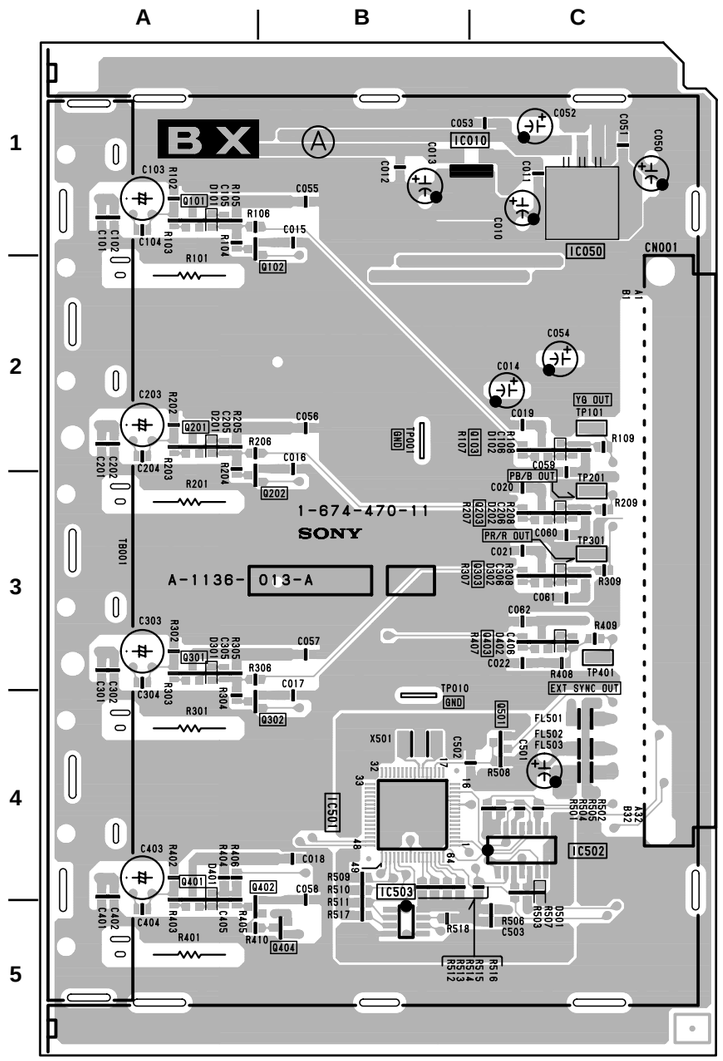
7-1. Schematic Diagrams and Printed Wiring Boards

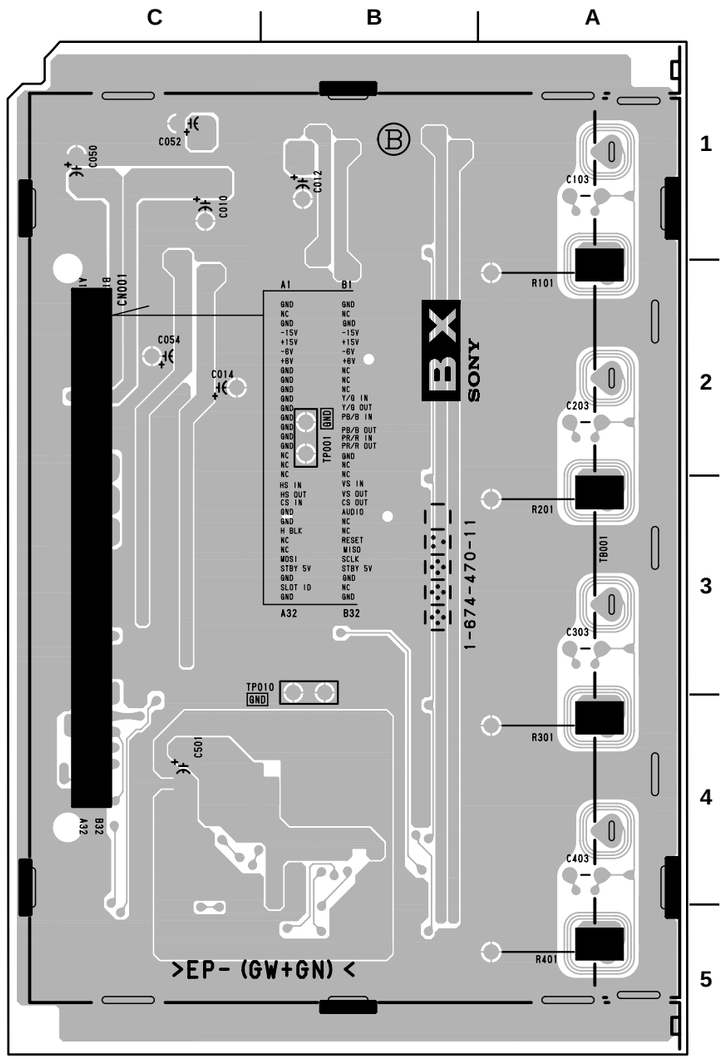
BX BOARD

* : B SIDE

D101	A-1
D102	C-2
D201	A-2
D202	C-3
D301	A-3
D302	C-3
D401	A-4
D402	C-3
D501	C-5
IC010	B-1
IC050	C-1
IC501	B-4
IC502	C-4
IC503	B-5
Q101	A-1
Q102	B-2
Q103	C-2
Q201	A-2
Q202	B-3
Q203	C-3
Q301	A-3
Q302	B-4
Q303	C-3
Q401	A-4
Q402	B-4
Q403	C-3
Q404	B-5
Q501	C-4
TP001	B-2
TP010	B-4
TP101	C-2
TP201	C-3
TP301	C-3
TP401	C-3

BX BOARD (BKM-129X)

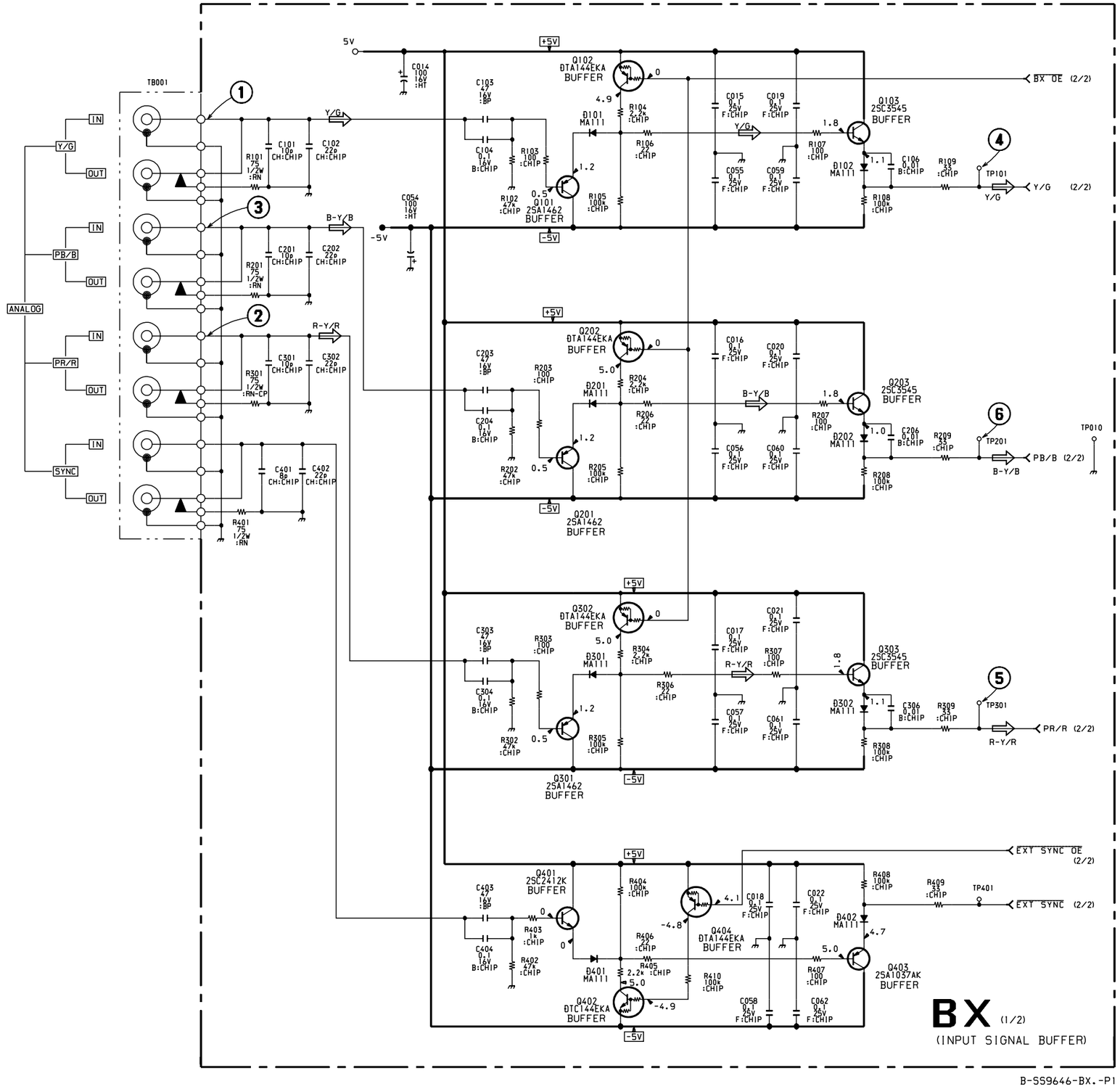




BX –A SIDE–
SUFFIX: -11

BX –B SIDE–
SUFFIX: -11

BX (1/2) BKM-129X



BX BOARD WAVEFORMS

① 2.0Vp-p (H)

② 1.4Vp-p (H)

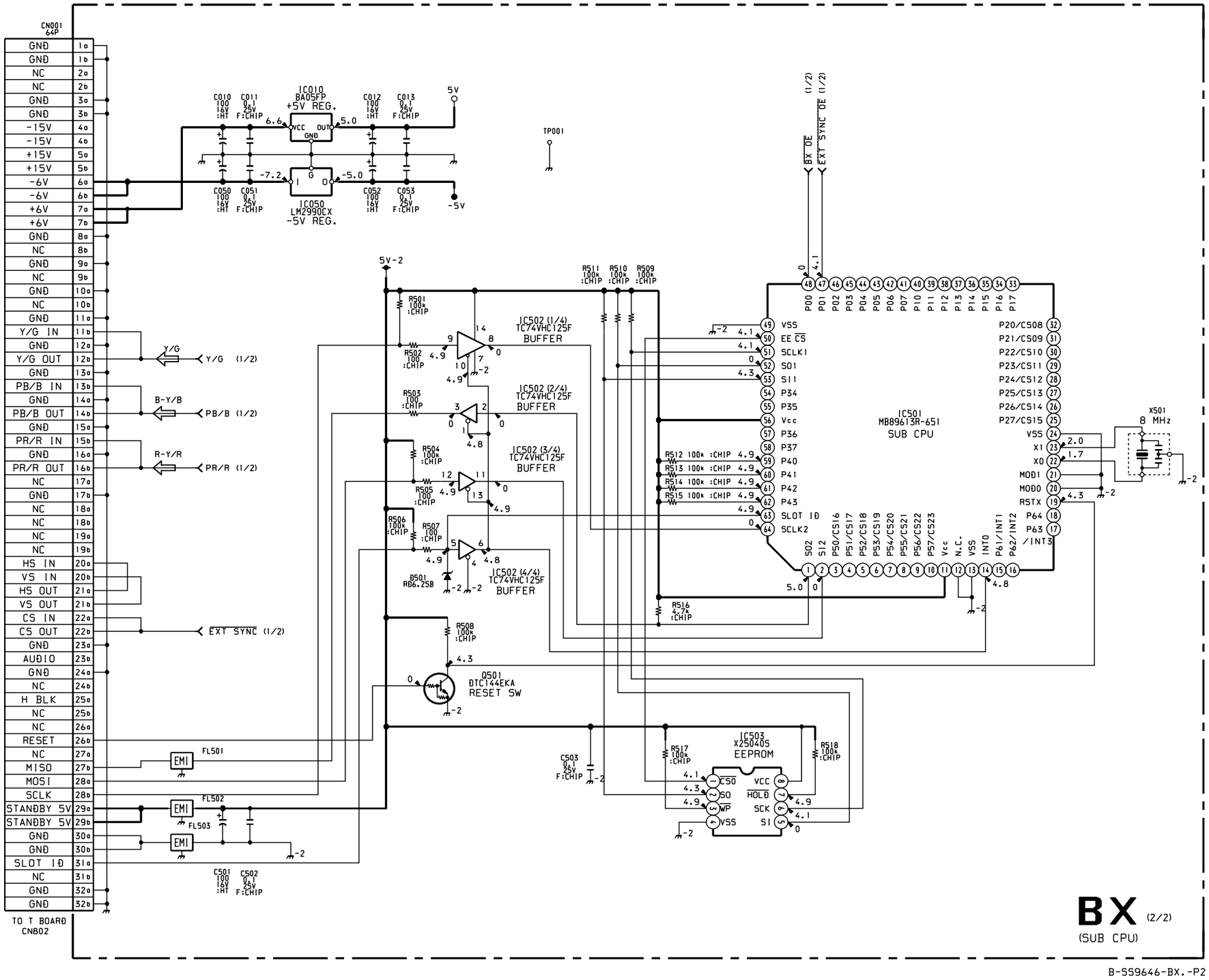
③ 1.4Vp-p (H)

④ 0.9Vp-p (H)

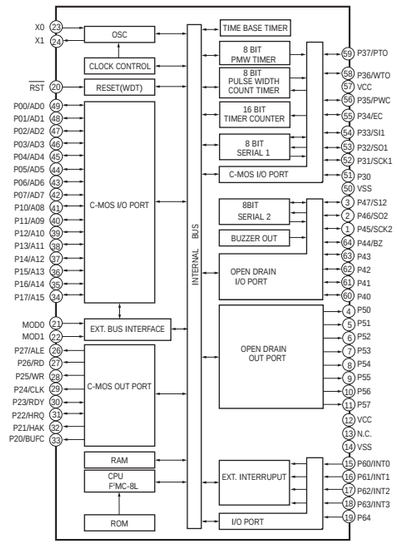
⑤ 0.6Vp-p (H)

⑥ 0.6Vp-p (H)

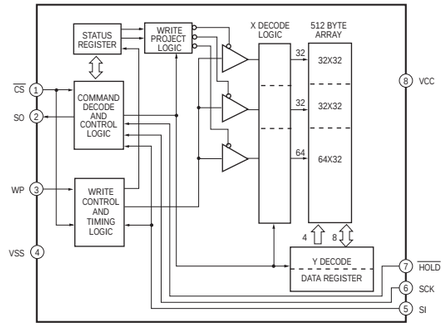
BX (2/2) BKM-129X



MB89613R-651 (IC501)



X25040S (IC503)



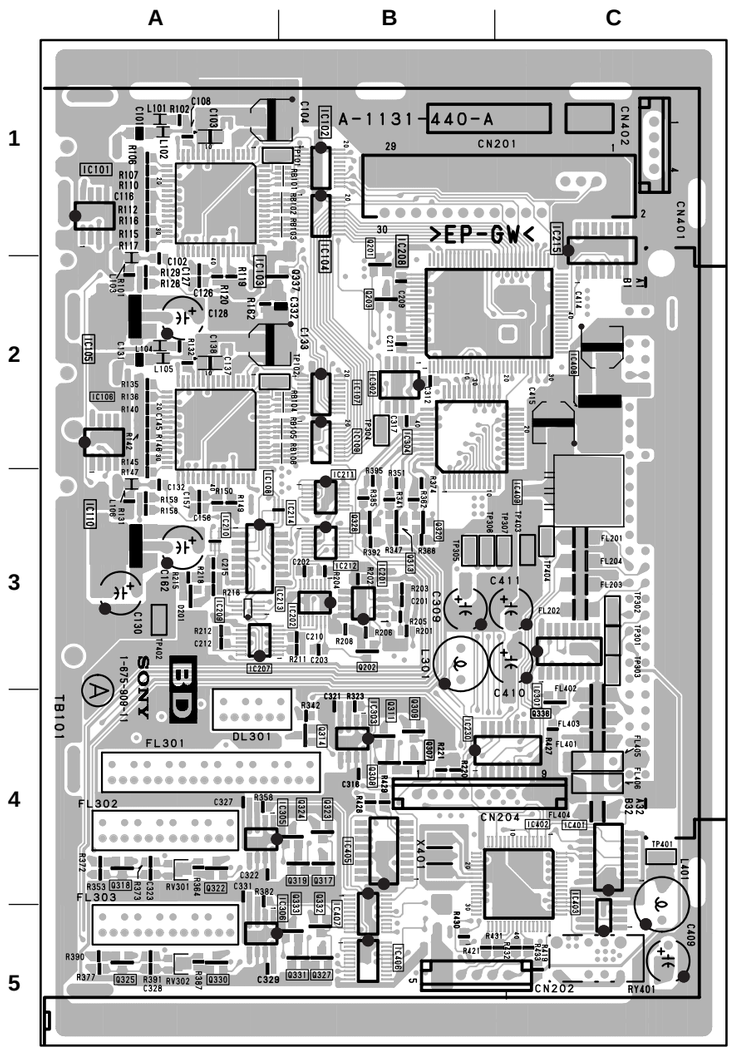
BD BKM-120D

BD BOARD

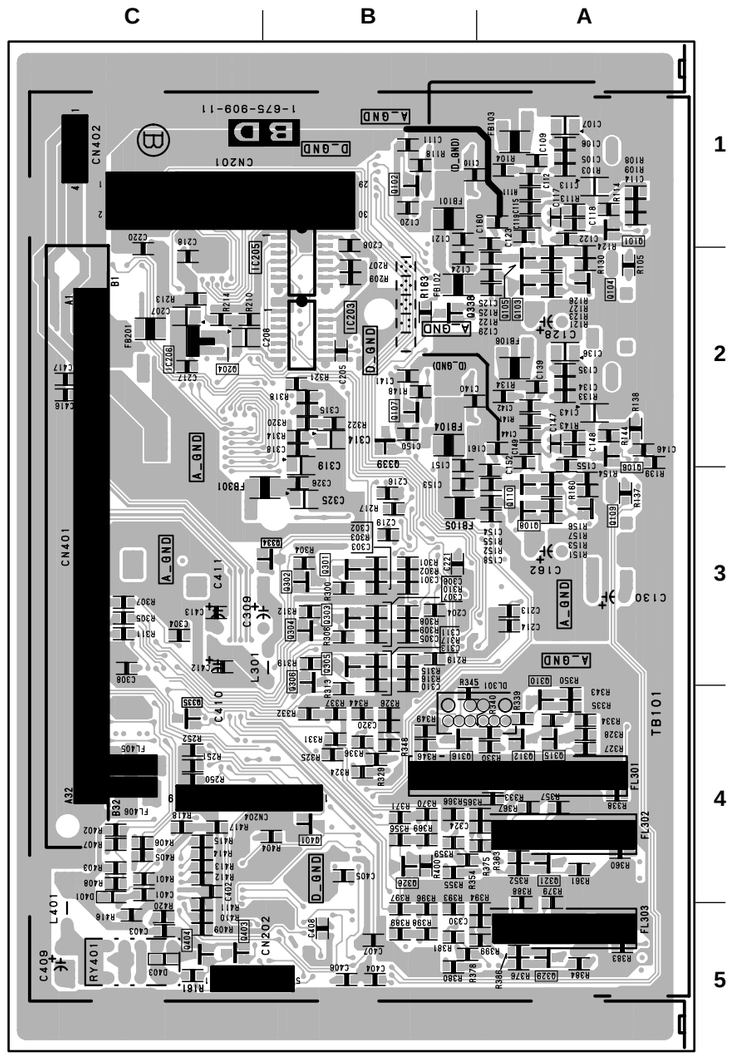
*:B-SIDE

D201	A-3	Q101	*A-1
D401	*C-5	Q102	*B-1
D403	*C-5	Q103	*A-2
		Q104	*A-2
IC101	A-1	Q105	*A-2
IC102	B-1	Q106	*A-2
IC103	A-1	Q107	*B-2
IC104	B-1	Q108	*A-3
IC105	A-2	Q109	*A-3
IC106	A-2	Q110	*A-3
IC107	B-2	Q201	B-1
IC108	A-2	Q202	B-3
IC109	B-2	Q203	B-2
IC110	A-3	Q204	*C-2
IC201	B-3	Q301	*B-3
IC202	B-3	Q302	*B-3
IC203	*B-2	Q303	*B-3
IC205	*C-2	Q304	*B-3
IC206	*A-3	Q305	*B-3
IC207	B-2	Q306	*B-3
IC208	B-2	Q307	B-4
IC209	A-3	Q308	B-4
IC210	A-3	Q309	B-4
IC211	B-3	Q310	*A-4
IC212	B-3	Q311	B-4
IC213	B-3	Q312	*A-4
IC214	B-3	Q313	B-3
IC215	C-1	Q314	B-4
IC230	C-4	Q315	*A-4
IC301	C-4	Q316	*B-4
IC302	B-2	Q317	B-4
IC303	B-4	Q318	A-4
IC304	B-2	Q319	B-4
IC305	A-4	Q320	B-3
IC306	A-5	Q321	*A-4
IC401	C-4	Q322	A-4
IC402	C-4	Q323	B-4
IC403	C-5	Q324	B-4
IC405	B-4	Q325	A-5
IC406	B-5	Q326	*B-4
IC407	B-5	Q327	B-5
IC408	C-2	Q328	B-3
IC409	C-3	Q329	*A-5
		Q330	A-5
		Q331	B-5
		Q332	B-5
		Q333	B-5
		Q334	*B-3
		Q335	*C-4
		Q336	C-4
		Q337	B-2
		Q338	*B-2
		Q339	*B-2
		Q401	*B-4
		Q403	*C-5
		Q404	*C-5
		RV301	A-4
		RV302	A-5
		TP101	B-1
		TP102	B-2
		TP301	C-3
		TP302	C-3
		TP303	C-3
		TP304	B-2
		TP305	B-3
		TP306	B-3
		TP307	C-3
		TP401	C-4
		TP402	A-3
		TP403	C-3
		TP404	C-3

BD BOARD (BKM-120D)



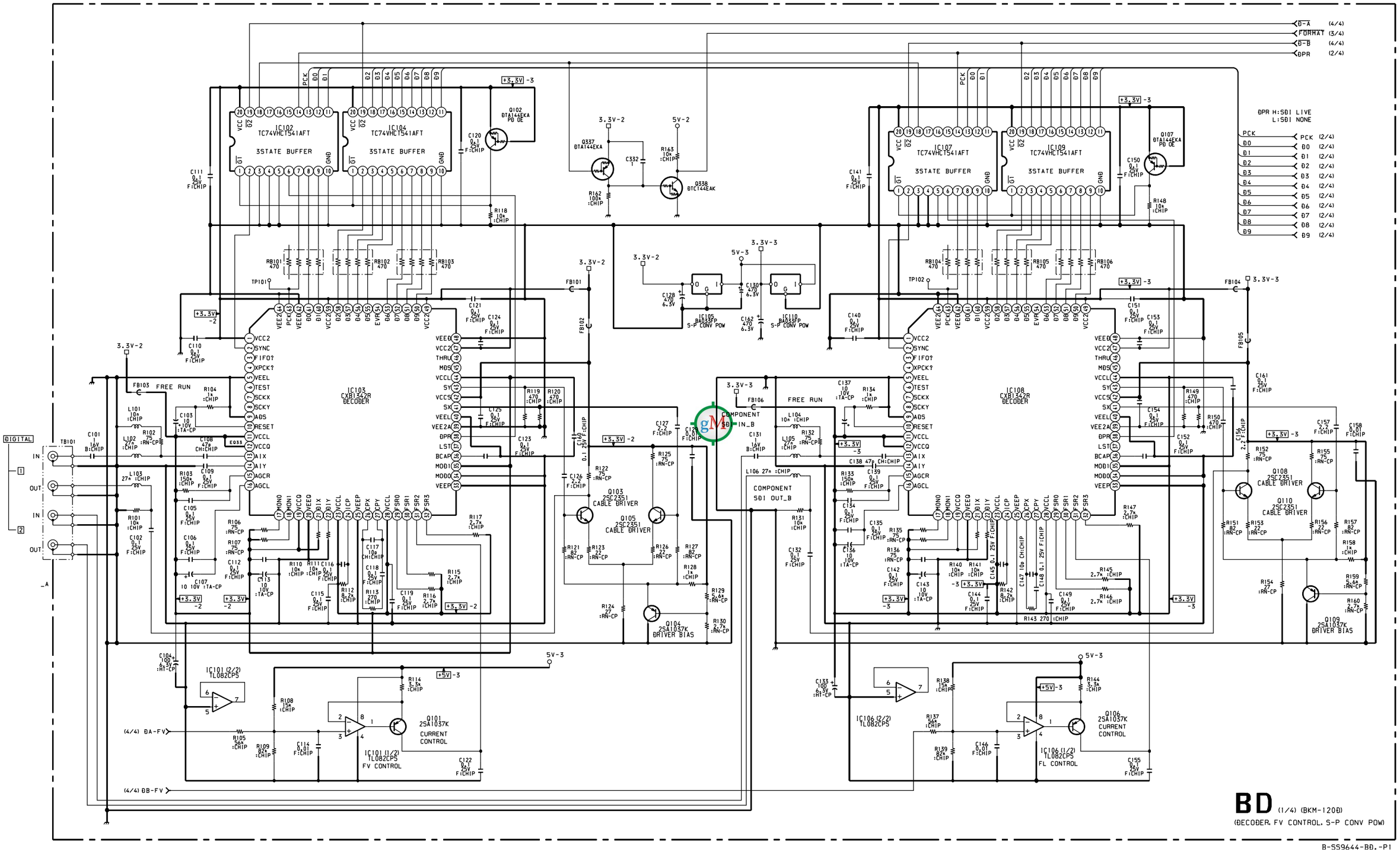
BD –A SIDE–
SUFFIX: -11



BD –B SIDE–
SUFFIX: -11

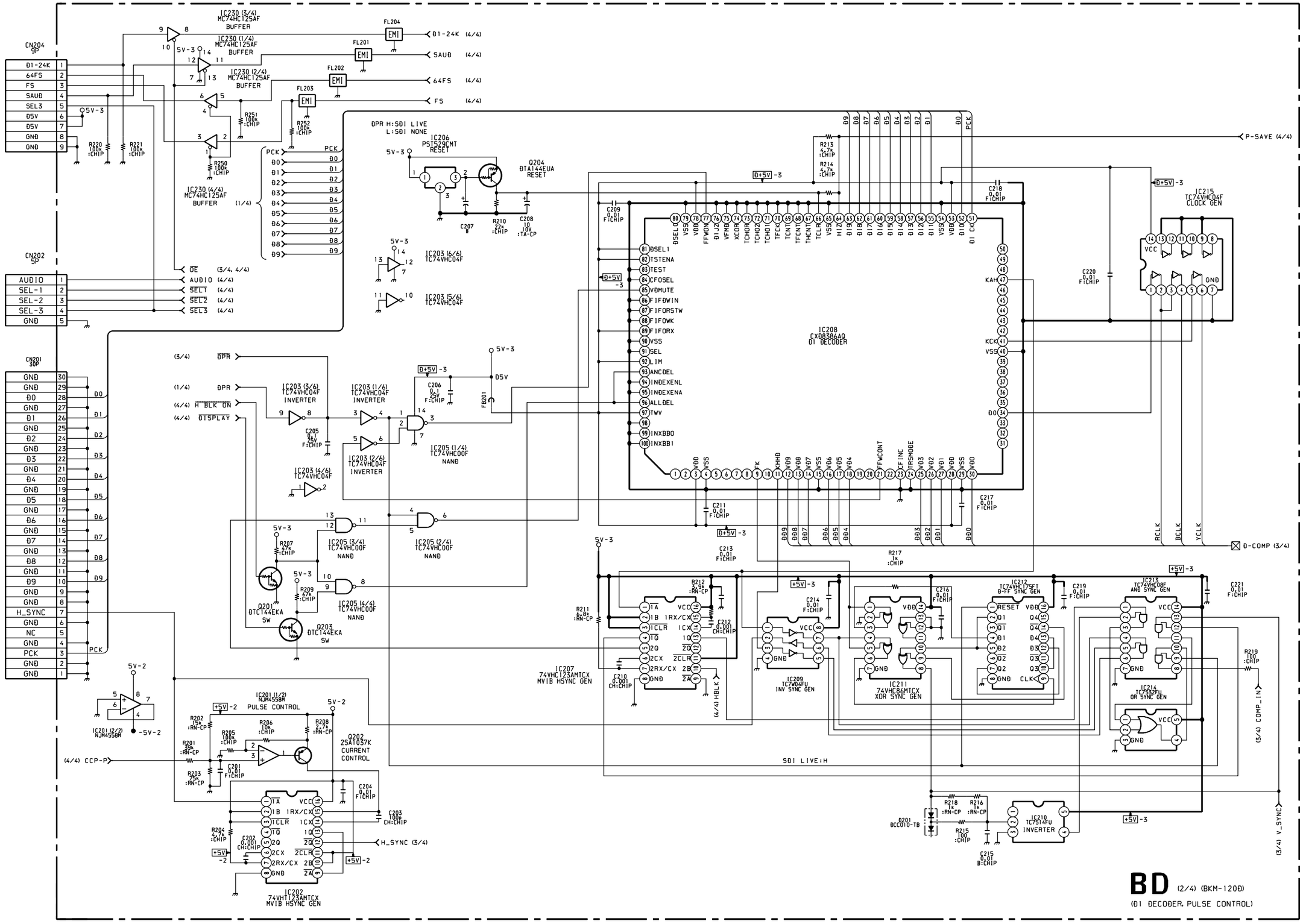
7-5

BD (1/4) BKM-120D



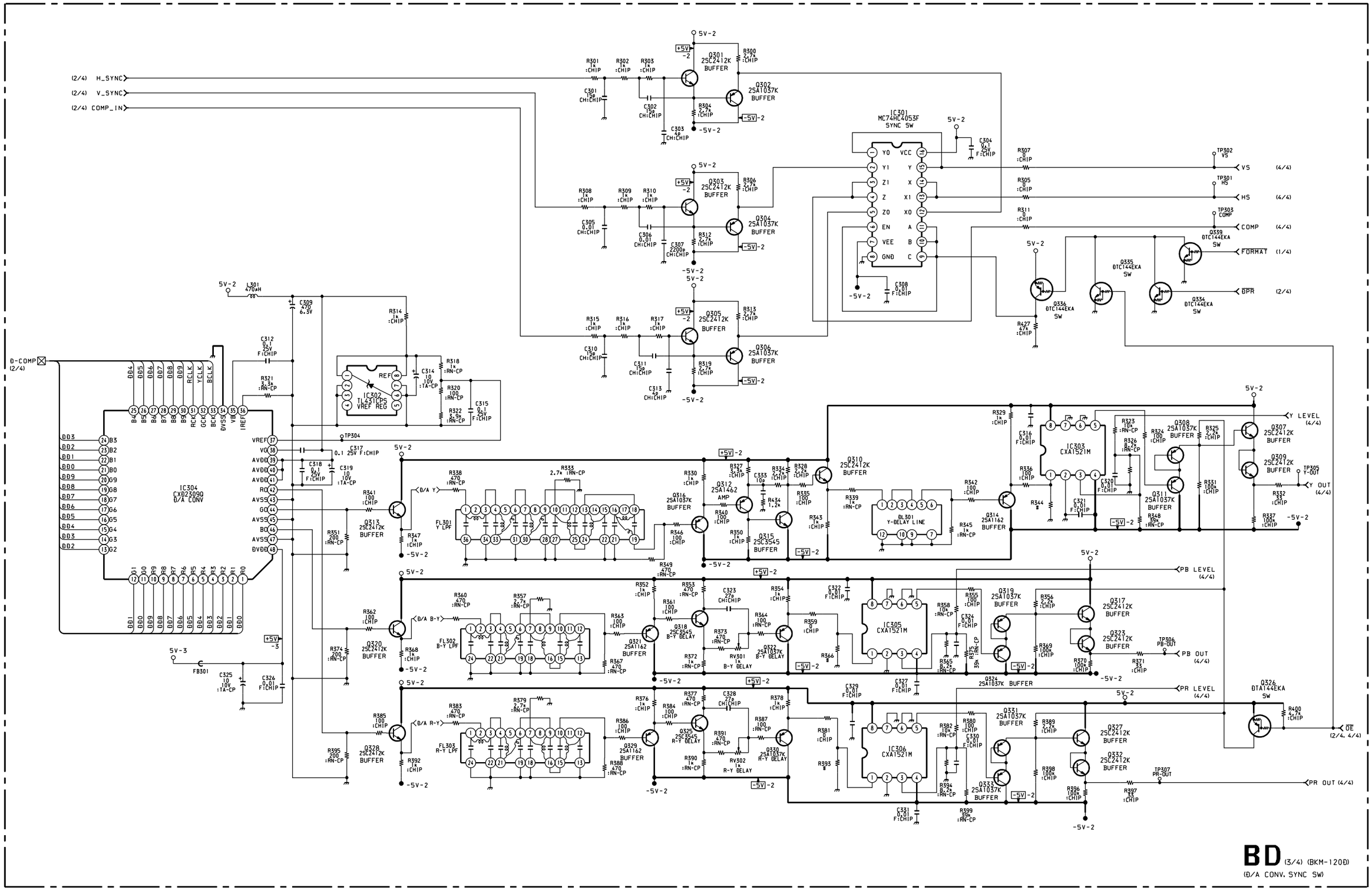
7-6

BD (2/4) BKM-120D



B-SS9644-BD.-P2

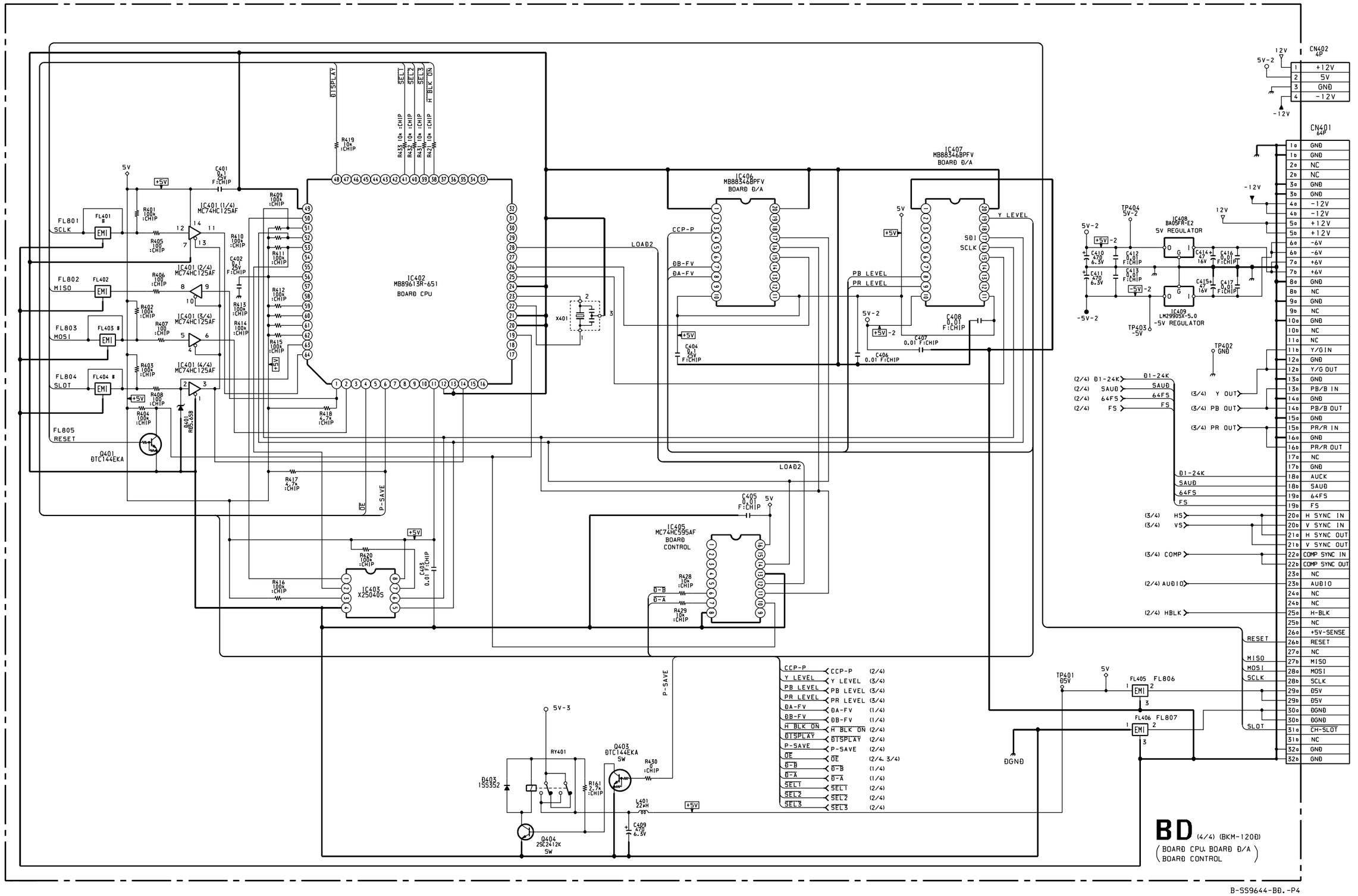
BD (3/4) BKM-120D



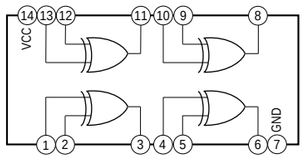
BD (3/4) (BKM-120D)
(D/A CONV, SYNC SW)

B-5S9644-BD.-P3

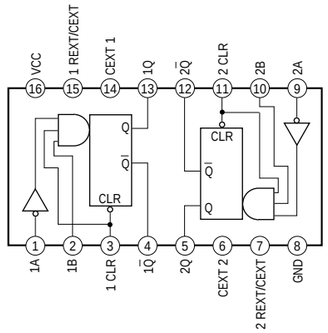
BD (4/4) BKM-120D



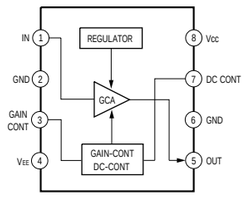
74VHC86MTCX (IC211)



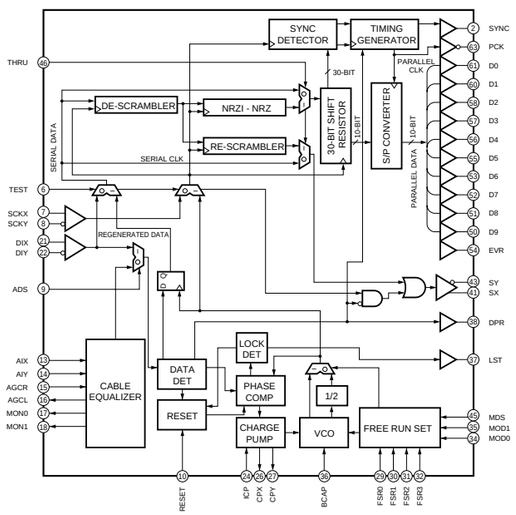
74VHCT123AMTCX (IC202, 207)



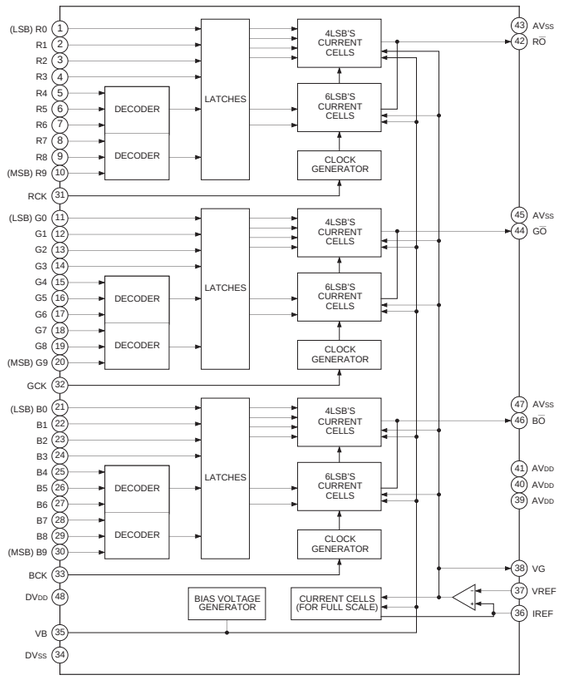
CXA1521M (IC303, 305, 306)



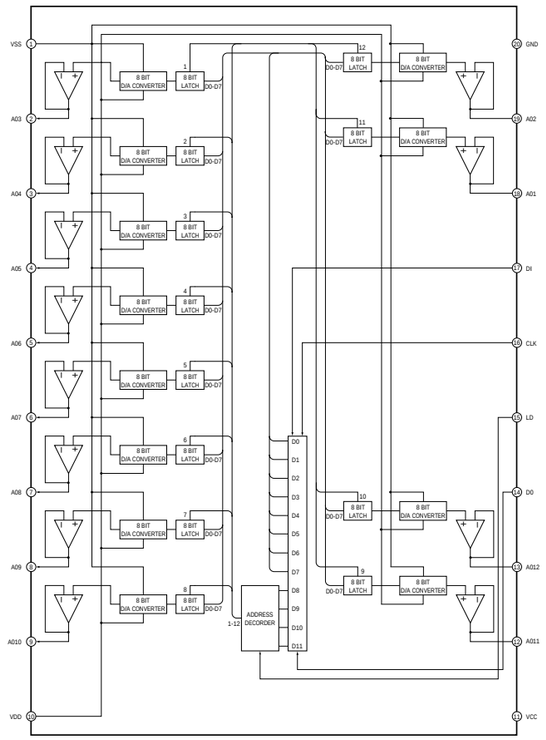
CXB1342R (IC103, 108)



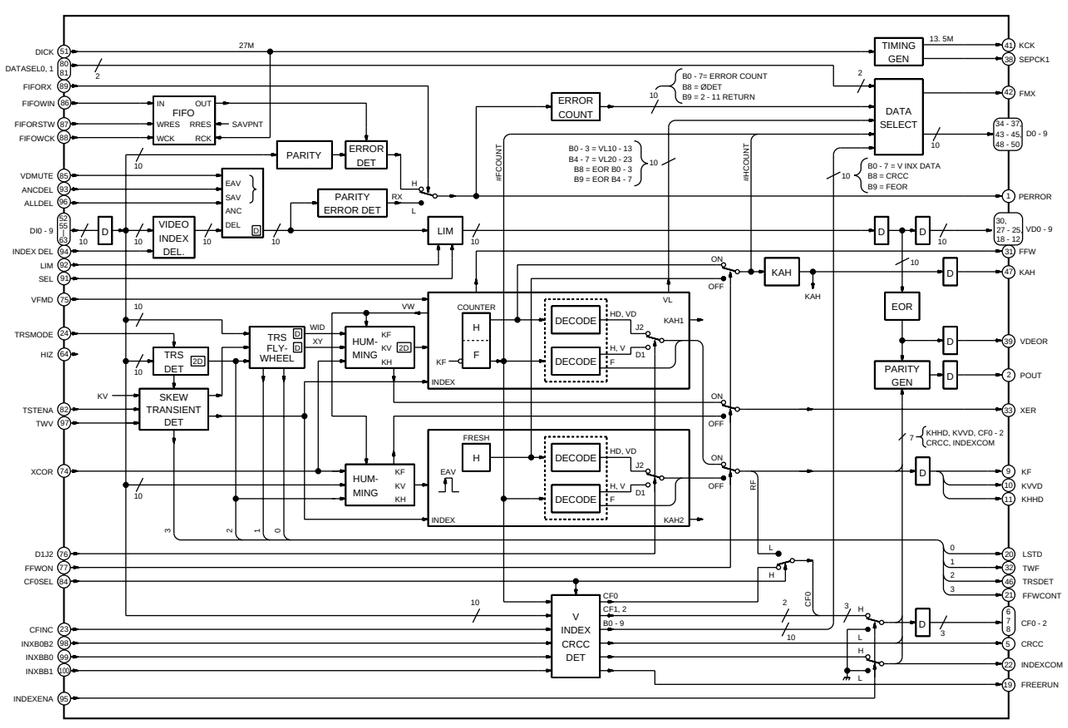
CXD2309Q (IC304)



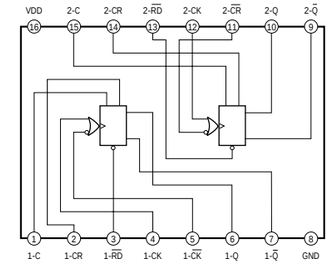
MB88346BPFV (IC406, 407)



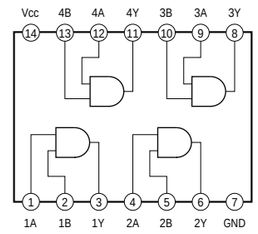
CXD8386AQ (IC208)



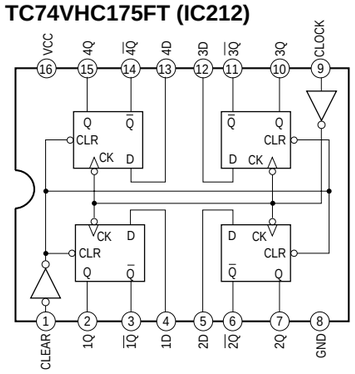
MC74HC595AF (IC405)



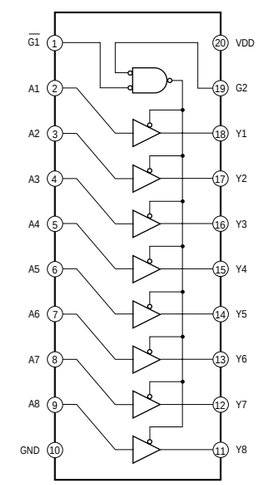
TC74VHC08F (IC213)



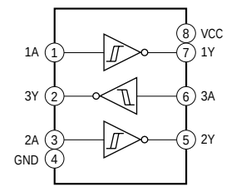
TC74VHC175FT (IC212)



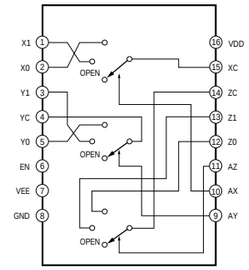
TC74VHCT541AFT (IC102, 104, 107, 109)



TC7S14FU (IC210)



MC74HC4053F (IC301)



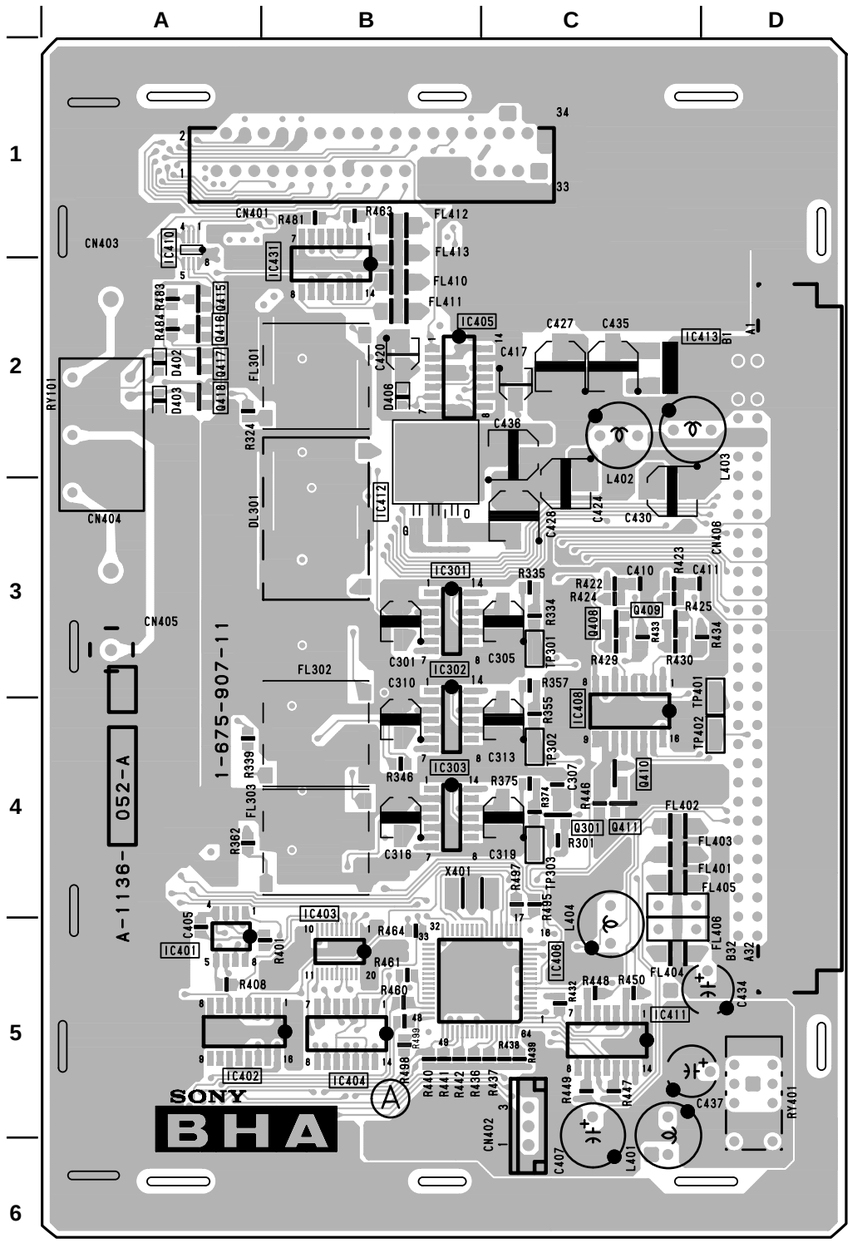
BHA BKM-142HD

BHA BOARD (BKM-142HD)

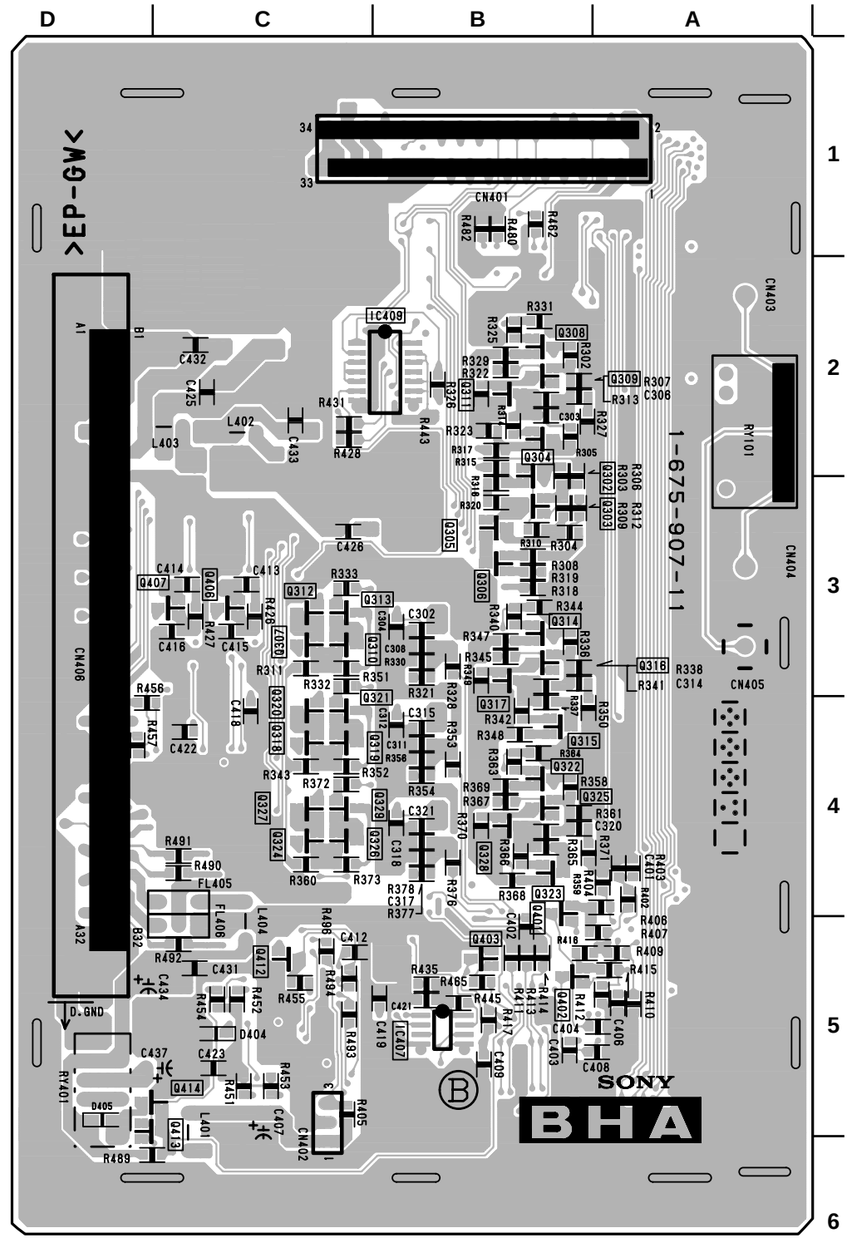
BHA BOARD

*:B-SIDE

D402	A-2
D403	A-3
D404	*C-5
D405	*D-5
D406	B-2
IC301	B-3
IC302	B-3
IC303	B-4
IC401	A-5
IC402	A-5
IC403	B-4
IC404	B-5
IC405	B-2
IC406	B-2
IC407	*B-5
IC408	C-4
IC409	*B-2
IC410	A-1
IC411	C-5
IC412	B-3
IC413	C-2
IC431	B-2
Q301	C-4
Q302	*A-2
Q303	*A-3
Q304	*B-2
Q305	*B-3
Q306	*B-3
Q307	*C-3
Q308	*B-2
Q309	*A-2
Q310	*B-3
Q311	*B-2
Q312	*C-3
Q313	*B-3
Q314	*B-3
Q315	*B-3
Q316	*A-3
Q317	*B-4
Q318	*C-4
Q319	*B-4
Q320	*C-4
Q321	*B-4
Q322	*B-4
Q323	*B-4
Q324	*C-4
Q325	*A-4
Q326	*B-4
Q327	*C-4
Q328	*B-4
Q329	*B-4
Q401	*B-5
Q402	*B-5
Q403	*B-5
Q406	*C-3
Q407	*C-3
Q408	C-3
Q409	C-3
Q410	C-4
Q411	C-4
Q412	*C-5
Q413	*C-6
Q414	*C-5
Q415	A-2
Q416	A-2
Q417	A-2
Q418	A-2

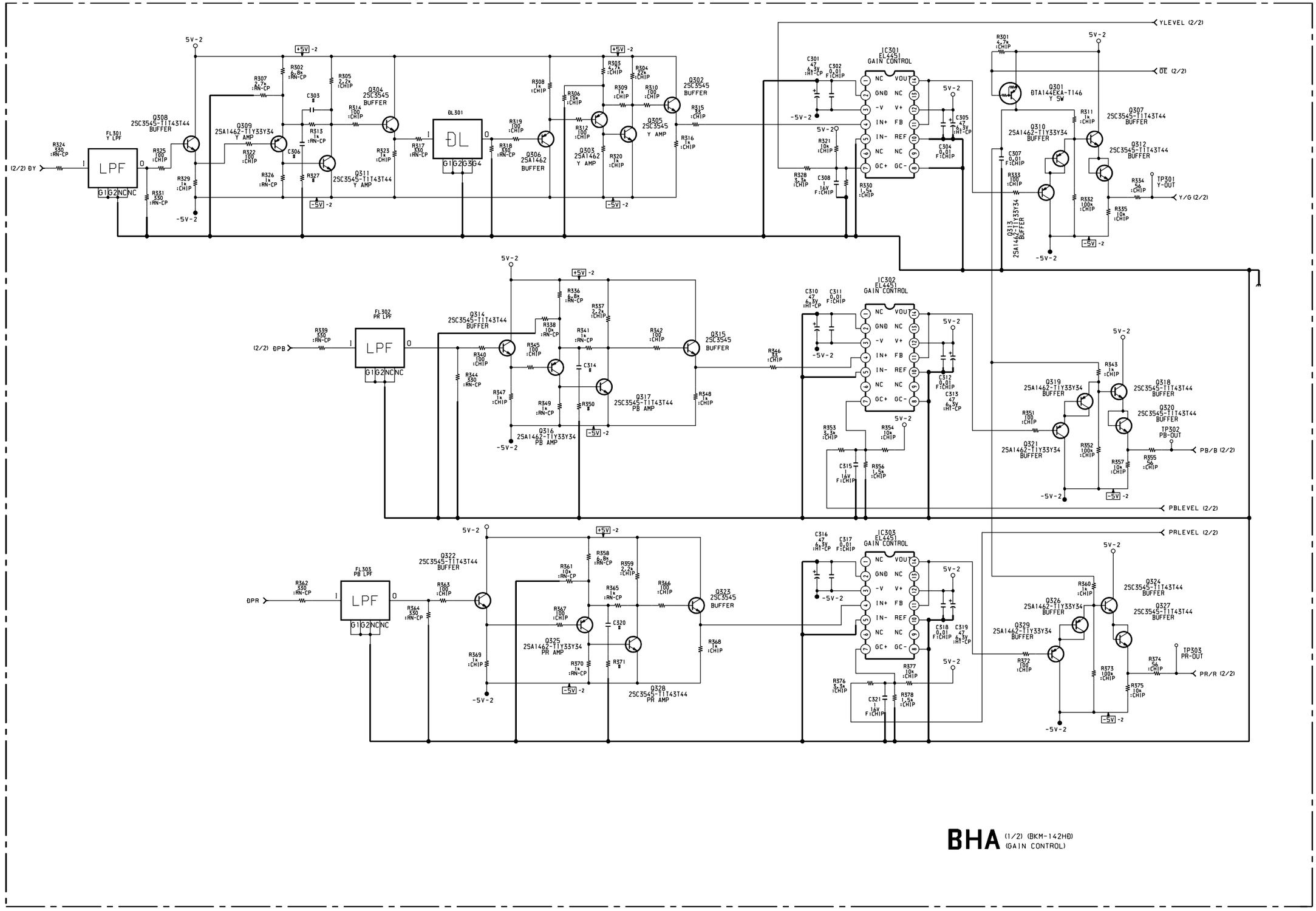


BHA –A SIDE–
SUFFIX: -11

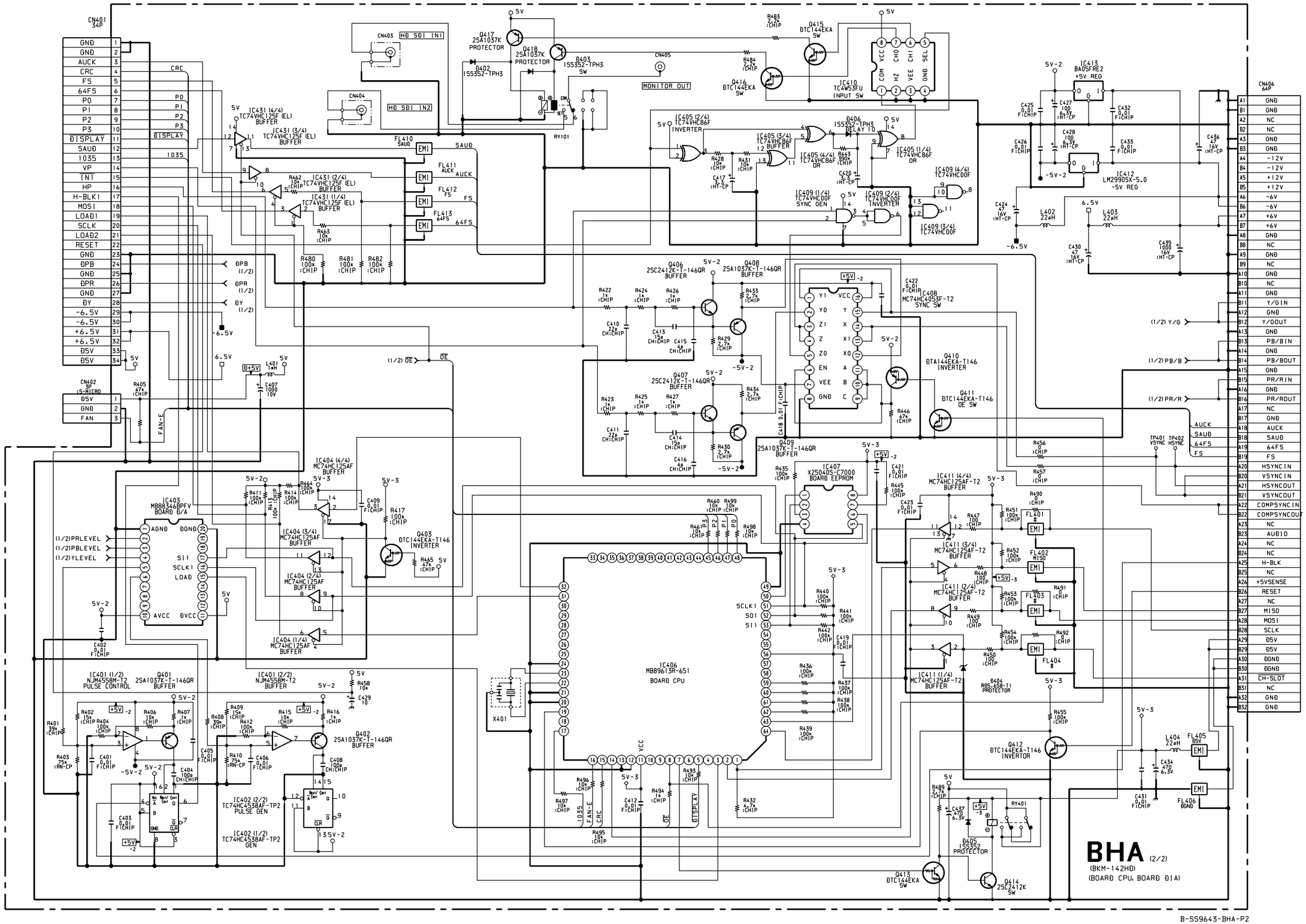


BHA –B SIDE–
SUFFIX: -11

BHA (1/2) BKM-142HD

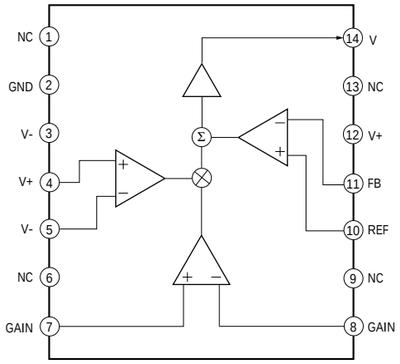


BHA (2/2) BKM-142HD

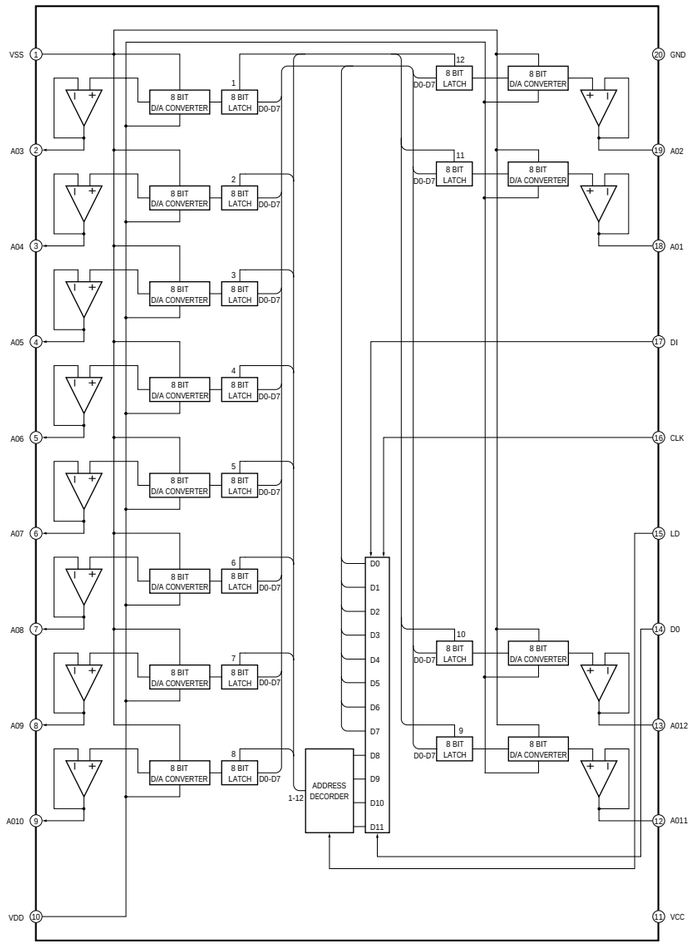


BHA BKM-142HD

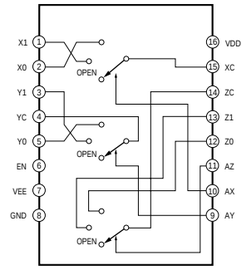
EL4451 (IC301, 302, 303)



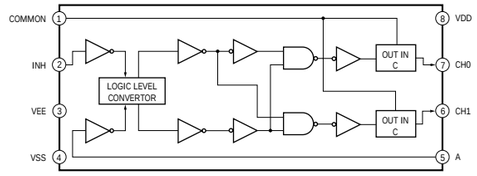
MB88346BPFV (IC403)



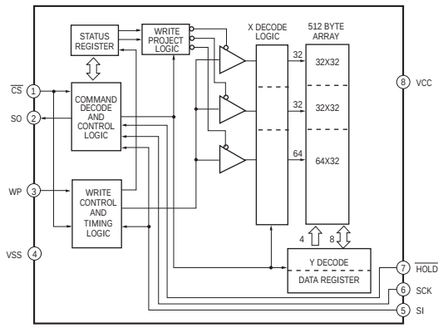
MC74HC4053F (IC408)



TC4W53FU (IC410)



X25040S-C7000 (IC407)



7-14

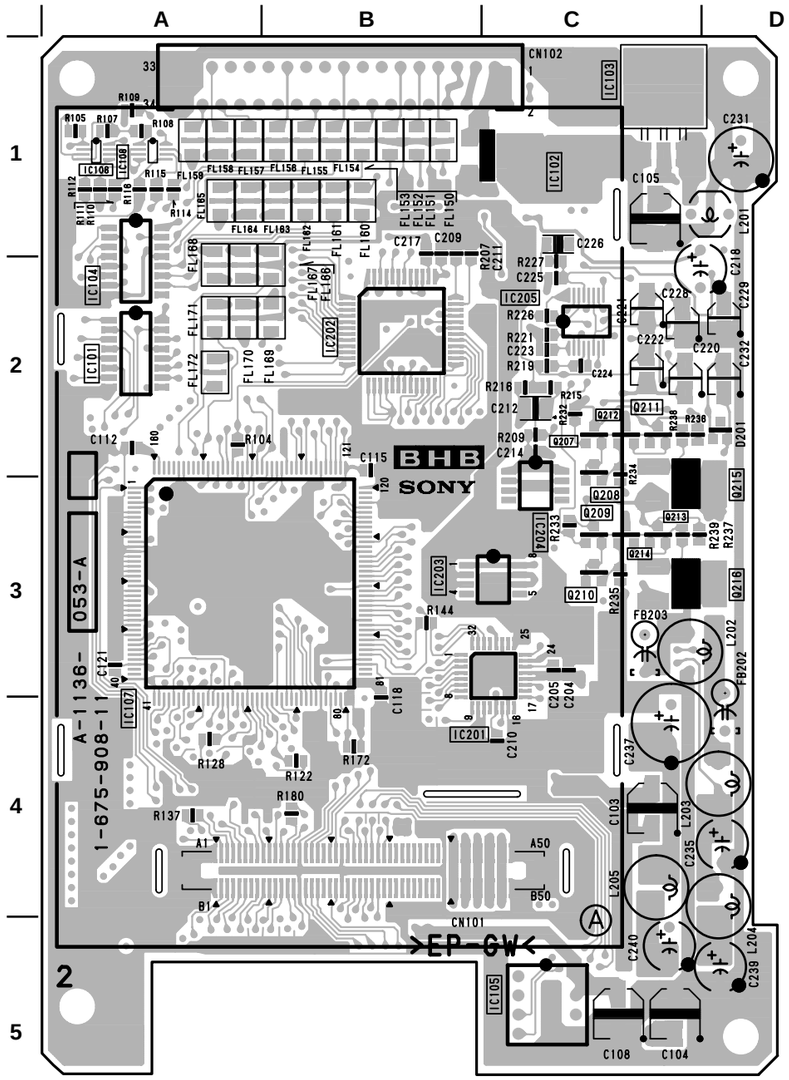
BHB BKM-142HD

BHB BOARD

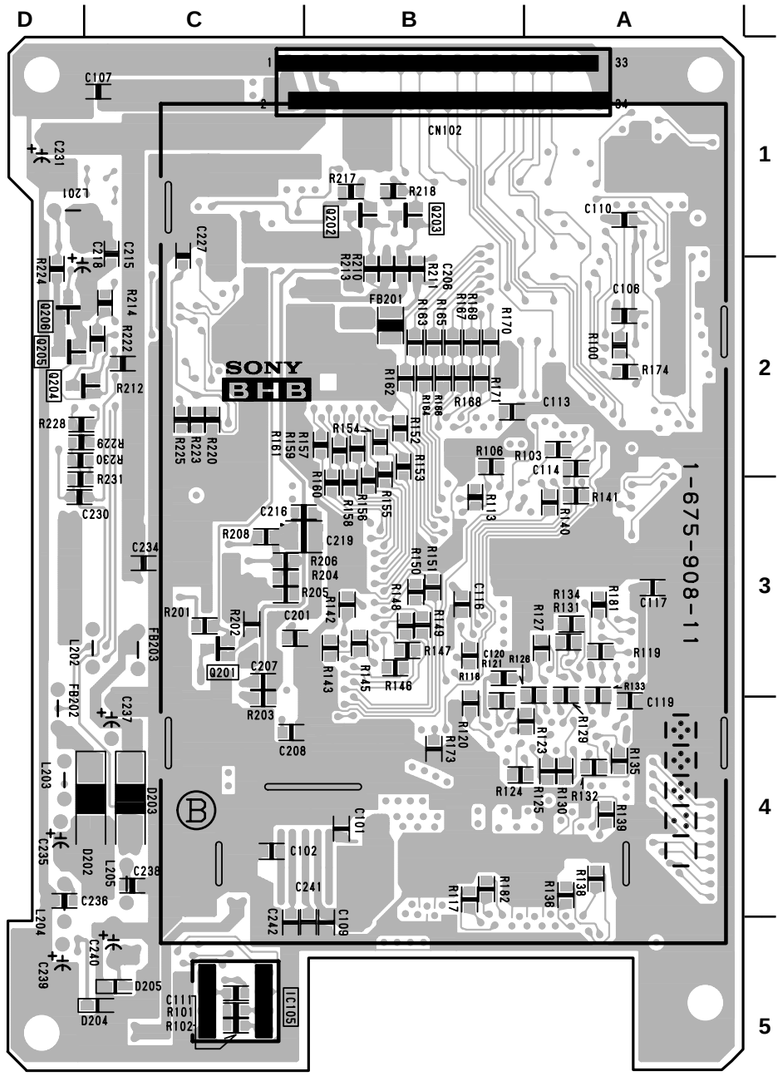
*:B-SIDE

D202	*C-4
D203	*C-4
D204	*C-5
D205	*C-5
IC101	A-2
IC102	C-1
IC103	C-1
IC104	A-2
IC106	A-1
IC107	A-4
IC108	A-1
IC201	B-4
IC202	B-2
IC203	B-3
IC204	C-3
IC205	C-2
Q201	*C-3
Q202	*B-1
Q203	*B-1
Q204	*D-2
Q205	*D-2
Q206	*D-7
Q207	C-7
Q208	C-3
Q209	C-3
Q210	C-3
Q211	C-2
Q212	C-2
Q213	C-3
Q214	C-3
Q215	D-3
Q216	D-3

BHB BOARD (BKM-142HD)



BHB –A SIDE–
SUFFIX: -11

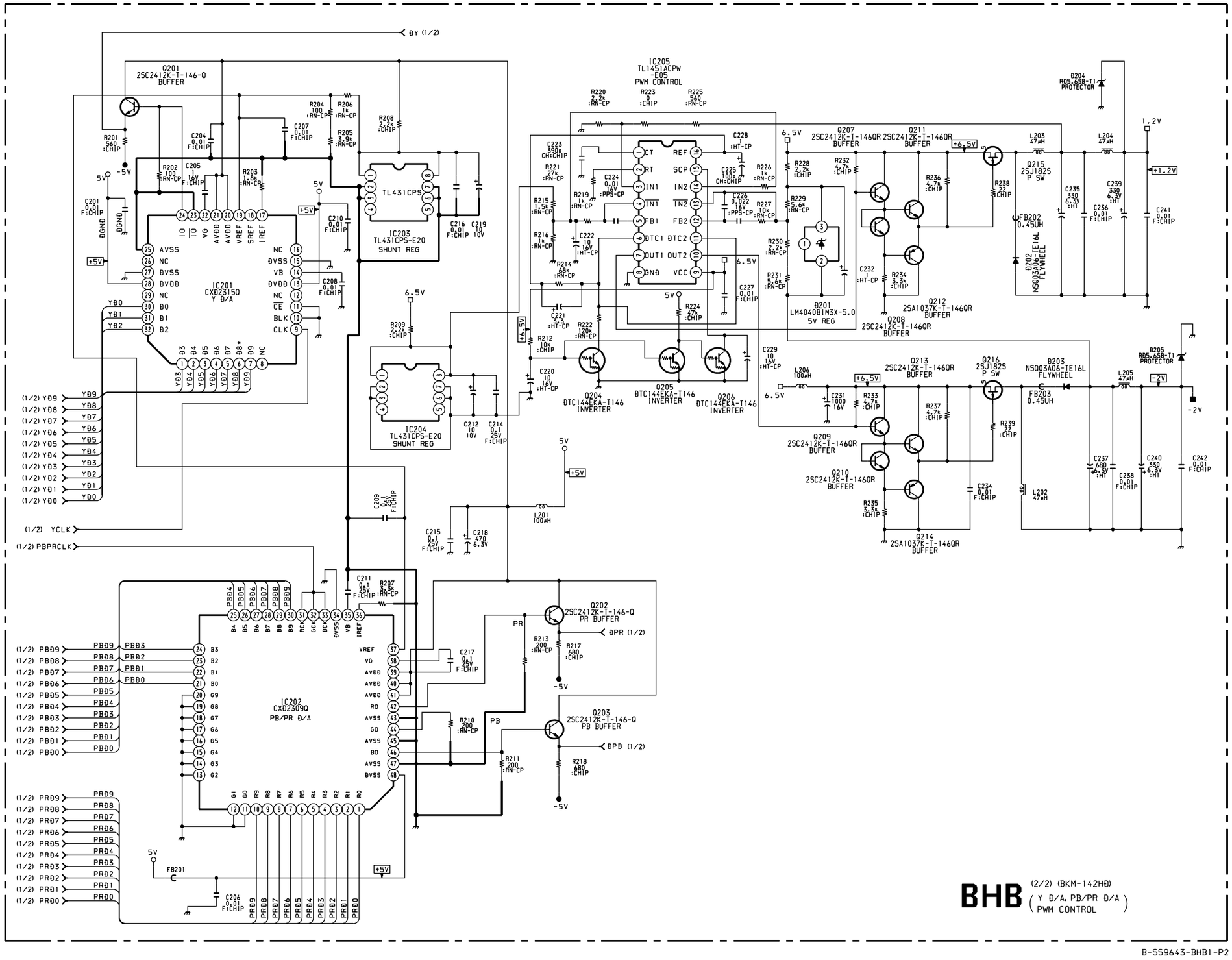


BHB –B SIDE–
SUFFIX: -11

7-15

BHB (1/2) BKM-142HD

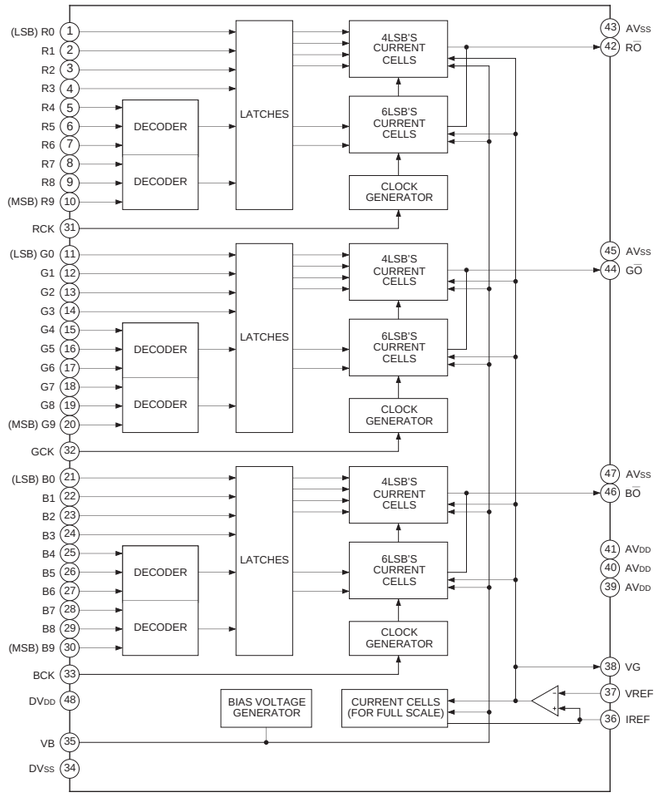
BHB (2/2) BKM-142HD



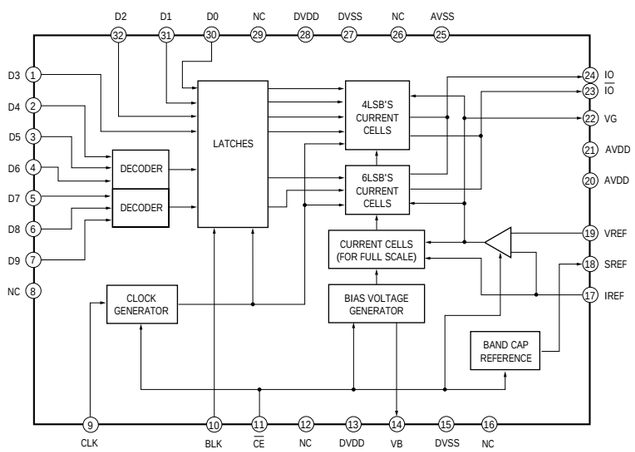
B-SS9643-BHB1-P2

BHB BKM-142HD

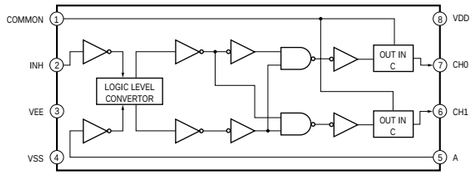
CXD2309Q (IC202)



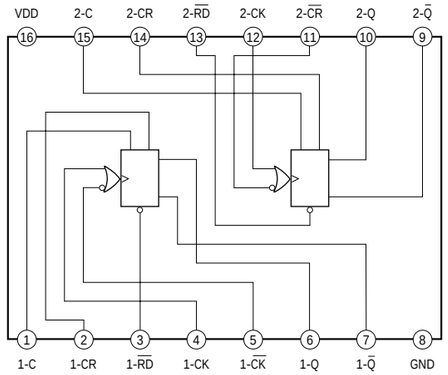
CXD2315Q (IC201)



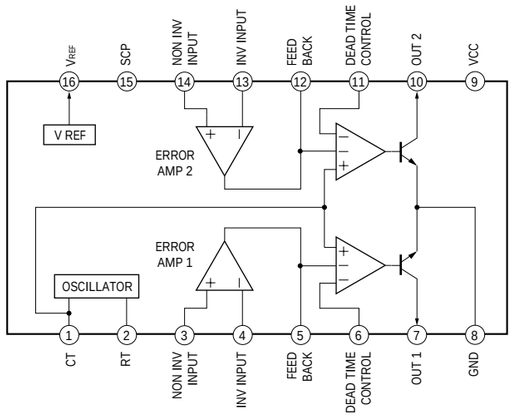
TC4W53FU (IC106, 108)



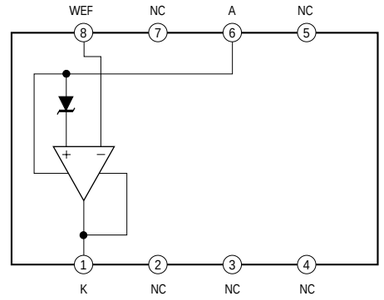
TC74VHC595F (IC101, 104)



TL1451ACPW (IC205)



TL431CPS-E20 (IC203, 204)



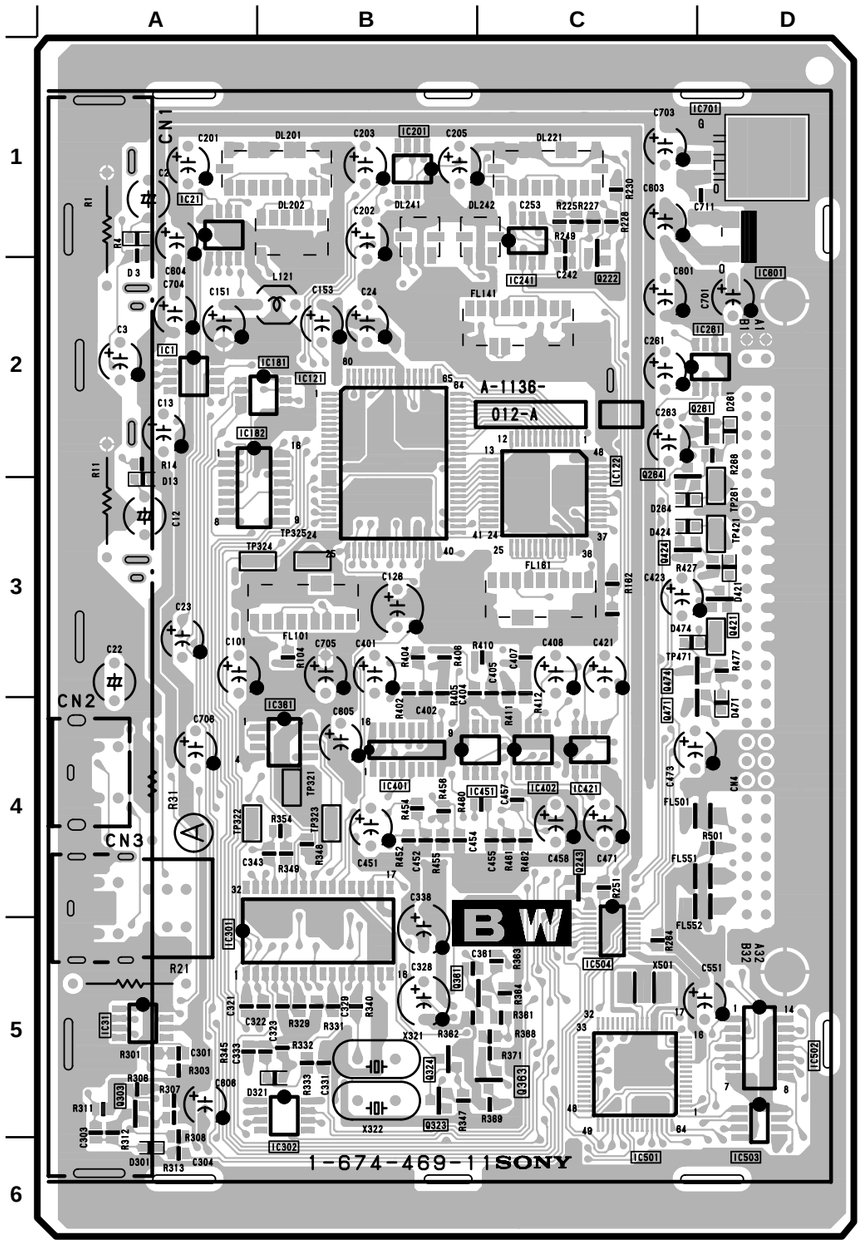
7-18

BW BOARD

*:B-SIDE

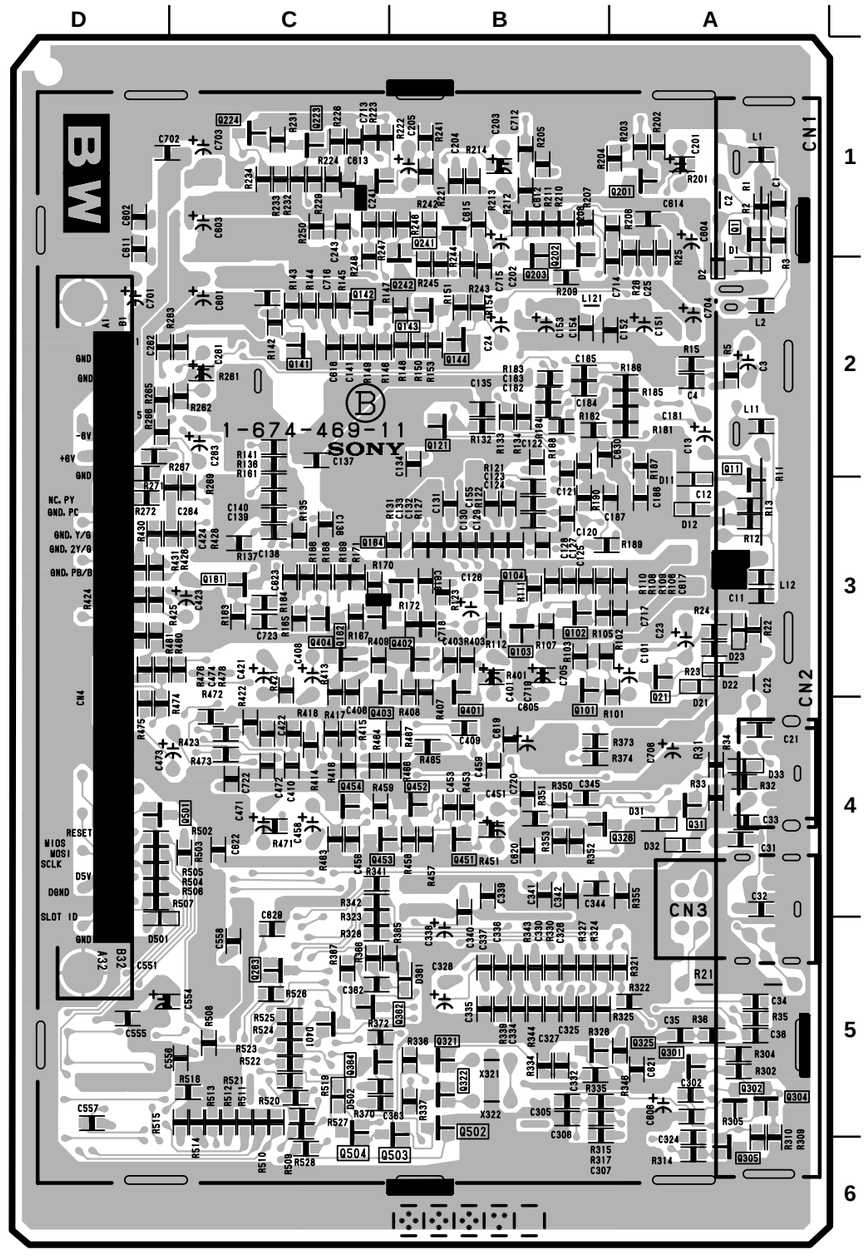
D1	*A-2	Q1	*A-1
D11	*A-3	Q11	*A-2
D21	*A-3	Q21	*A-3
D31	*A-4	Q31	*A-4
D261	D-2	Q101	*B-4
D264	C-3	Q102	*B-3
D301	A-6	Q103	*B-3
D321	B-5	Q104	*B-3
D361	*B-5	Q121	*B-2
D401		Q141	*C-2
D421	D-3	Q142	*C-2
D424	C-3	Q143	*B-2
D471	D-4	Q144	*B-2
D474	C-3	Q161	*C-3
D501	*D-5	Q162	*C-3
D502	*C-5	Q163	
		Q164	*C-3
IC1	A-2	Q201	*A-1
IC21	A-1	Q202	*B-2
IC31	A-5	Q203	*B-2
IC121	B-2	Q221	
IC122	C-3	Q223	*C-1
IC181	B-2	Q224	*C-1
IC182	A-3	Q241	*B-1
IC201	B-1	Q261	D-2
IC261	D-2	Q263	*C-5
IC301	B-5	Q264	C-3
IC302	B-6	Q301	*A-5
IC361	B-4	Q302	*A-5
IC401	B-4	Q303	A-5
IC402	C-4	Q304	*A-5
IC421	C-4	Q305	*A-6
IC451	B-4	Q321	*B-5
IC501	C-5	Q322	*B-5
IC502	D-5	Q323	B-5
IC503	D-5	Q324	B-5
IC504	C-5	Q325	*A-5
IC601	D-2	Q326	*A-4
IC701	D-1	Q361	B-5
		Q362	*C-5
		Q363	C-5
		Q364	*C-5
		Q401	*B-3
		Q402	*B-3
		Q403	*C-4
		Q404	*C-3
		Q421	D-3
		Q424	C-3
		Q451	*B-4
		Q452	*B-4
		Q453	*C-4
		Q454	*C-4
		Q471	C-4
		Q474	C-3
		Q501	*C-4
		Q502	*B-5
		Q503	*B-5
		Q504	*C-5

BW BOARD (BKM-127W)



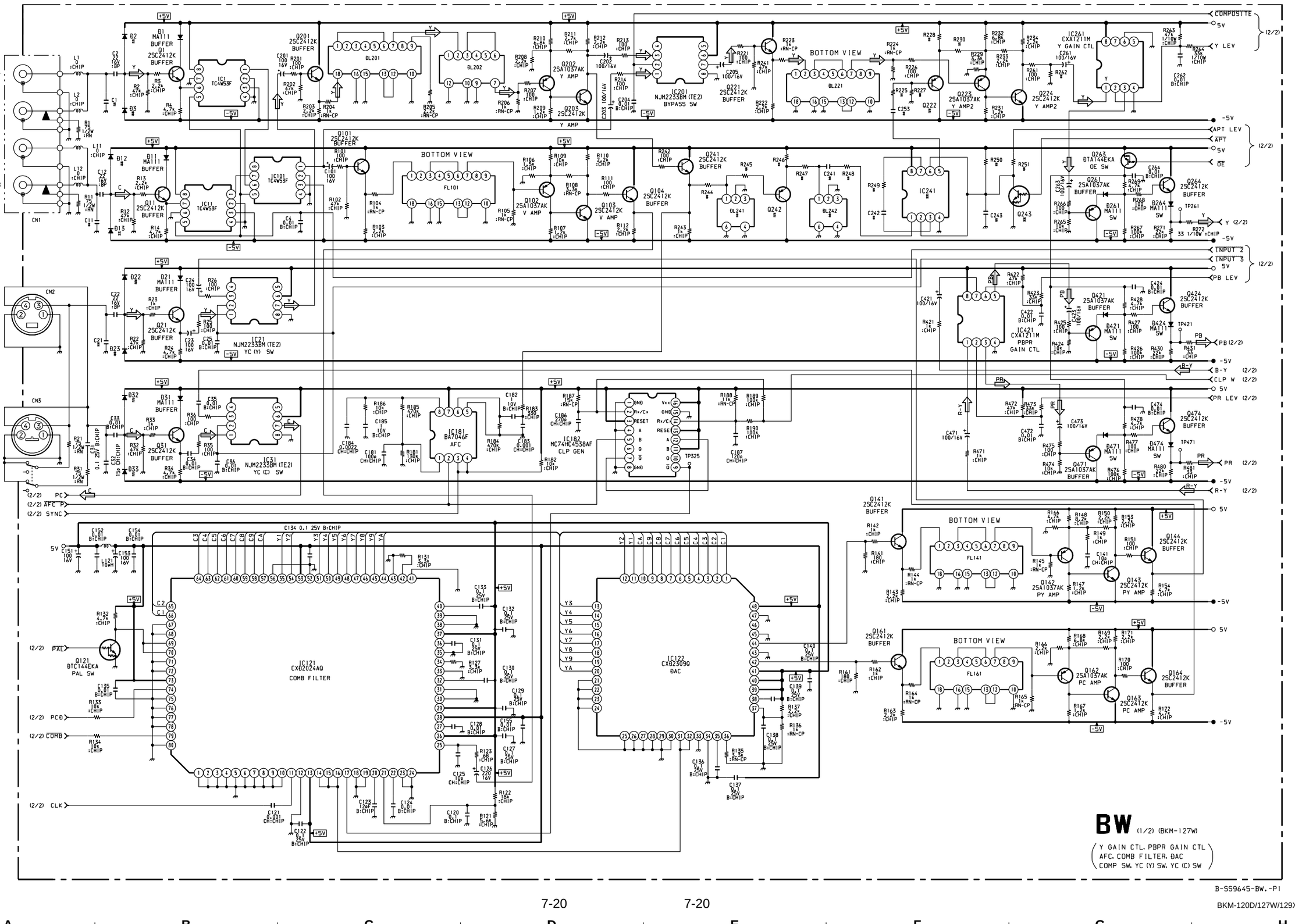
BW –A SIDE–

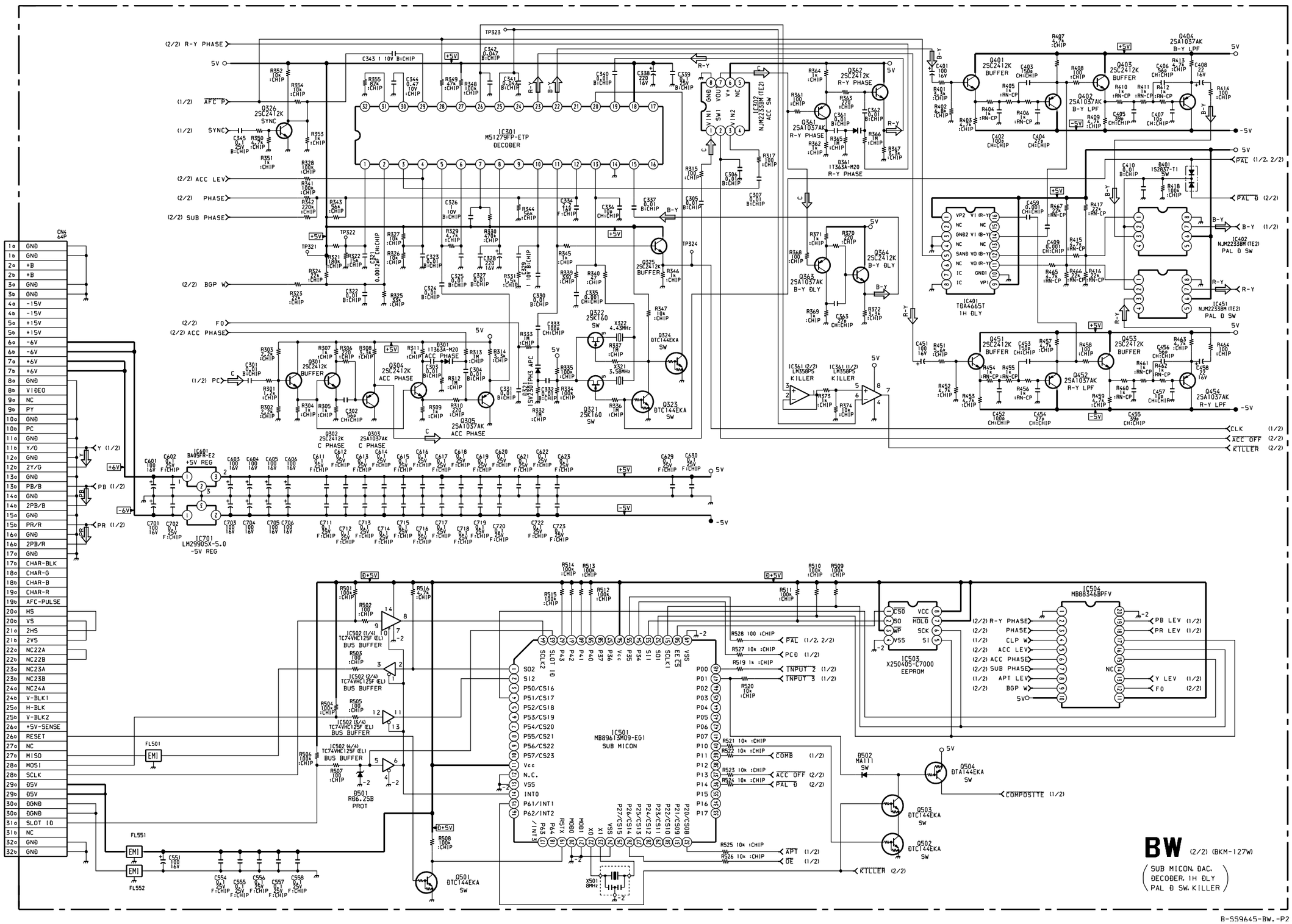
SUFFIX: -11



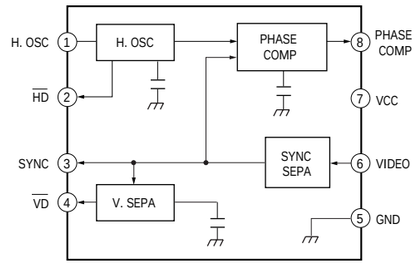
BW –B SIDE–

SUFFIX: -11

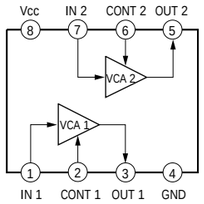

Y/Y/G
C/PB/B
CN1
CN2
CN3
IC1 TC4W55F
IC101 TC4W55F
IC21 NJM2233BM (TE2) YC (Y) SW
IC31 NJM2233BM (TE2) YC (C) SW
IC201 NJM2233BM (TE2) BYPASS SW
IC121 CXD2024AQ COMB FILTER
IC122 CXD2309Q DAC
IC181 BA7046F AFC
IC182 MC74HC4538AF CLP GEN
IC241
IC261 CXA1211M Y GAIN CTL
IC421 CXA1211M PBPR GAIN CTL
BOTTOM VIEW
COMPOSITE
Y LEV
APT LEV
APT
OE
INPUT 2
INPUT 3
PB LEV
PB (2/2)
B-Y (2/2)
CLP W (2/2)
PR LEV (2/2)
PR (2/2)
R-Y (2/2)
(2/2) PC
(2/2) AFC P
(2/2) SYNC
(2/2) PAL
(2/2) PCO
(2/2) COMB
(2/2) CLK
BW (1/2) (BKM-127W)
Y GAIN CTL, PBPR GAIN CTL
AFC, COMB FILTER, DAC
COMP SW, YC (Y) SW, YC (C) SW
B-SS9645-BW.-P1



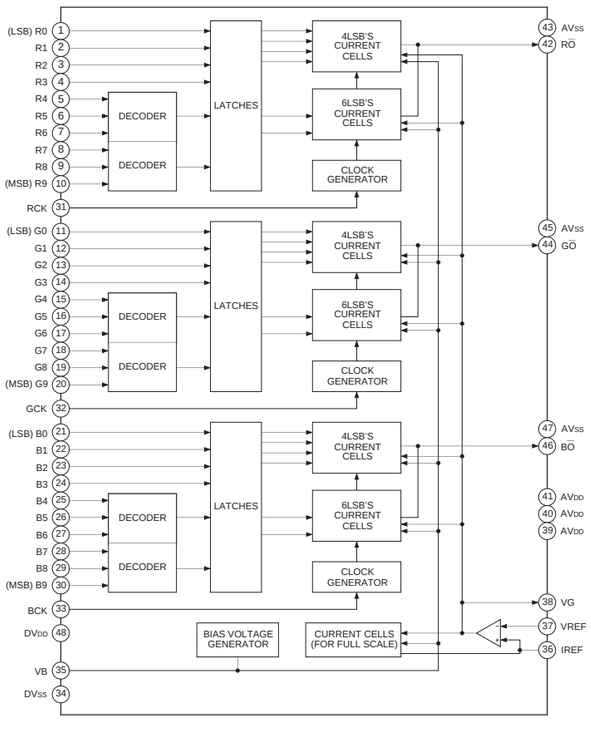
BA7046F (IC181)



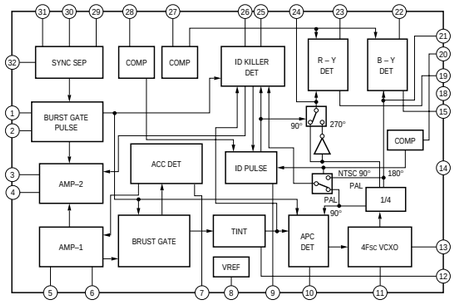
CXA1211M (IC261, 421)



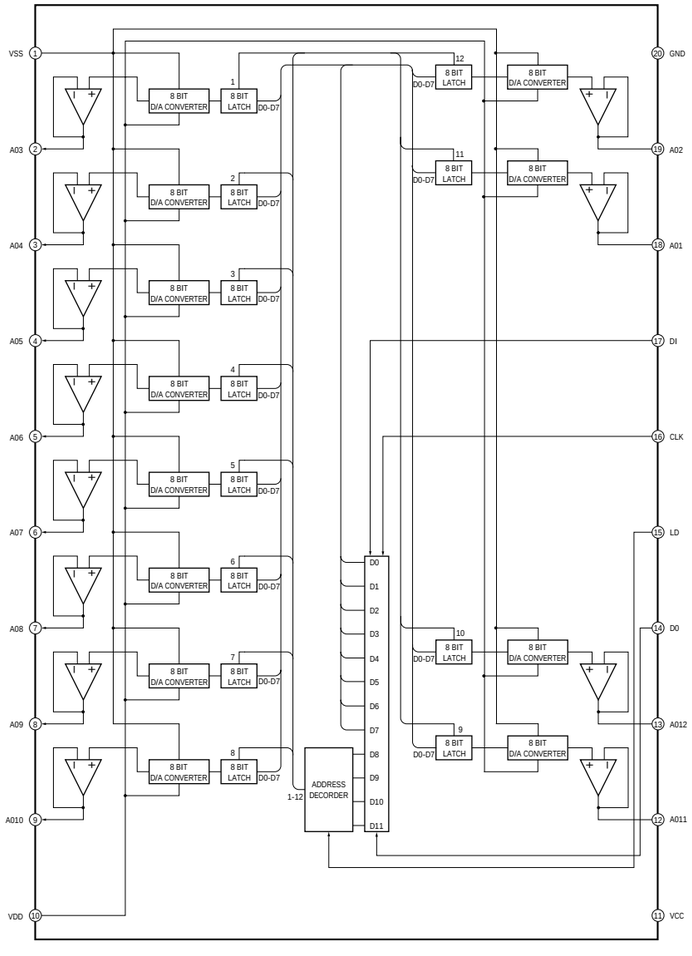
CXD2309Q (IC122)



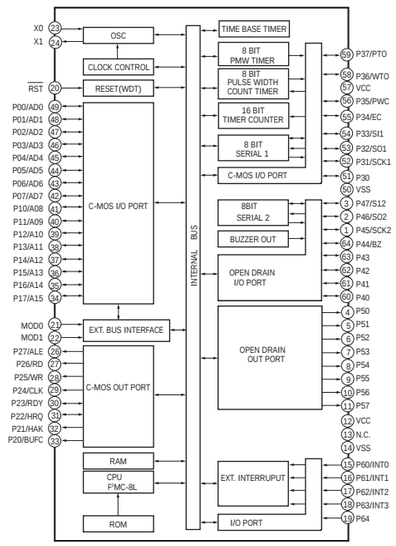
M51279FP-ETP (IC301)



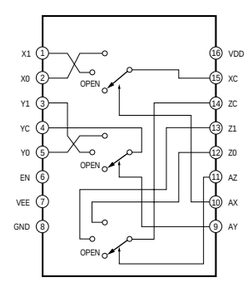
MB88346BPFV (IC504)



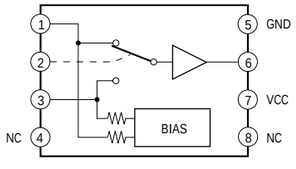
MB89613M09-EG1 (IC501)



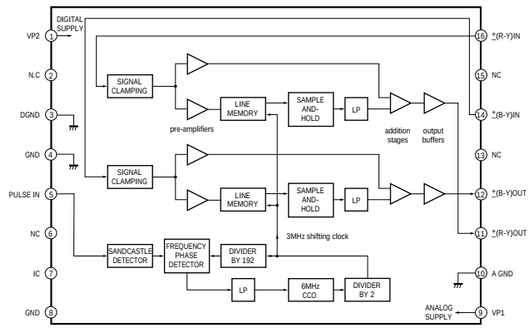
MC74HC4538AF (IC182)



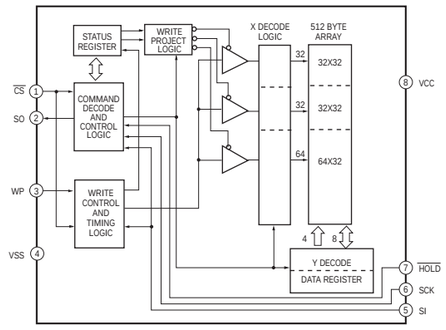
NJM2233BM
(IC1, 201, 21, 302, 31, 402, 451,)



TDA4665T (IC401)



X25040S-C7000 (IC503)



English
99IS16033-1
Printed in Japan

Sony Corporation
Broadcasting & Professional Systems Company

9-929-661-01